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ABSTRACT

The paper describes the rationale and development of a social learning curriculum for secondary level educable mentally retarded (EMR) students. Chapter I provides an historical perspective with a review of research covering such areas as the effectiveness of vocational programs, the employment potential of the mentally retarded, and work adjustment of the retarded. Background information to the Problem-Oriented Social Vocational Adaptation Program (POSVAP) is provided in a second chapter which outlines the model on which the curriculum is based. It is noted in Chapter III that 600 "problems at maturity" reported by professionals working with adult retardates were analyzed as part of the curriculum planning process. Described in Chapter IV are the problem-solving teaching techniques incorporated in the social learning curriculum and POSVAP. The pros and cons of various delivery systems are considered in Chapter V, and it is pointed out that the secondary-level curriculum is based on the premise that optimum learning takes place when there is a need for the learner to solve a problem, and that the most meaningful and interesting learning occurs when and where the problem arises. A final chapter reviews the results of two questionnaire surveys to obtain information about the current status of special education for secondary EMR students and to determine what attitudes and practices existed which would prove to be barriers to the POSVAP. Among appended materials are results of a survey of 376 school districts regarding secondary education programs for the mentally retarded. (SBH)

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A WORKING PAPER

SOCIAL LEARNING CURRICULUM FOR JUNIOR AND SENIOR HIGH SCHOOL EMRS

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NATIONAL INSTITUTE OF EDUCATION

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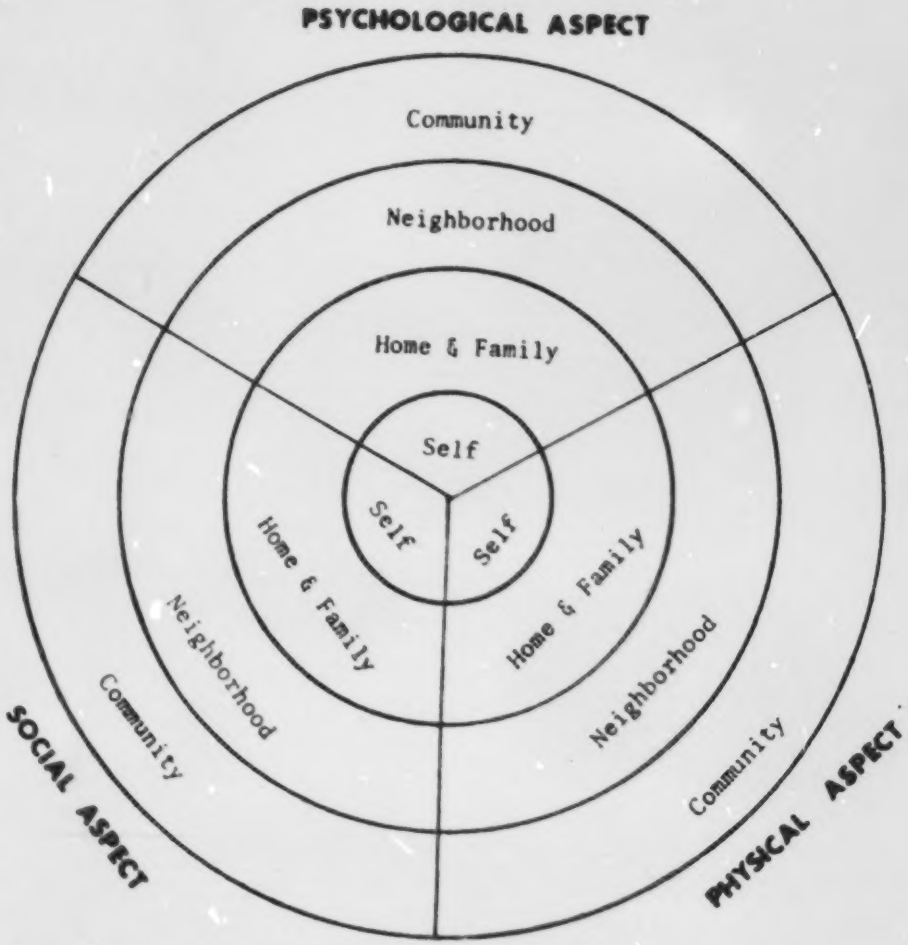

Social Learning Curriculum

Curriculum Research and Development Center
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Mental Retardation,

INTRODUCTION

For generations American public schools have been charged with a mission that supercedes basic learning. Horace Mann stated the real task of schools in 1848 when he said that education was "the great equalizer of the conditions of men - the balance wheel of the social machinery." The goal of public education was to support democratic principles by rendering all men equal in opportunity.

It did not take long for it to become obvious that not all students were benefitting equally from what the schools had to offer, or coming out equally well prepared to take their place in the democratic society. Out of this awareness came the field of "special education" which has attempted, over the years, to do something different to children diagnosed as "special" in some way in order to make them able to at least survive as adults. These attempts have met with spotty, if any, success.

By the early 1960s it had also become apparent that black and Spanish-speaking students were not getting as much from the educational process as they should. This gave rise to the movement to integrate the schools, an exercise which has so far yielded discouraging results. Billions of dollars spent in various other "reforms," such as Head Start and Title I of the Elementary and Secondary Education Act of 1965 have not resulted in any further cause for optimism.

The most impressive evidence of the schools' inability to provide an equal education for all came in 1966 with the Coleman report. Analyzing studies involving more than 600,000 children and 60,000 teachers in

4,000 schools, Coleman concluded that there were far fewer differences physical facilities, curriculums, and teachers than expected. The la variation in the achievement of students came not between schools but the same school. Coleman concluded that "family background differenc account for much more variation than do school differences." If this so, it raises the question of how the schools can become more relevan to the needs and lives of the children they serve, assuming that as t are now constituted, they are not as relevant as other forces in the ment of the child. Obviously, doing more of the same kinds of things have been doing is not going to solve the problem. The question is, can be done differently?

Most surveys of the prevalence of mental retardation in sel communities are consistent in finding that the percentage of identif tardates increases gradually from birth to age 6, jumps significantl age of school entry, and continues to rise reaching a peak in the 14 age period. The prevalence then drops rather dramatically from age This phenomenon, which has been observed in European countries as we the United States, is generally explained by the different criteria define retardation at different age levels. The relatively rigid de academic achievement imposed by school systems serve to call attent children who fail to meet expected norms.

Different criteria are applied during postschool years. T of society for vocational competence, social independence, and gros to expected norms of behavior seem to be more easily realizable tha mands of the school. The statistics of the prevalence studies sugg a large proportion, if not the majority, of children and youth ider retarded by the schools are no longer recognized as such in situati academic competence has little or no significance. This assumptio

highly significant in determining the educational methods and goals for the retarded child. Like all children, he spends only a part of his day in a school setting and is required to make some adaptation to his environment when he is away from school. It seems tenable to suggest that many of the students in special education programs who, later in life, merge into the normal community as indistinguishable from their normal peers are "retarded" because of something within the school rather than something inherent in themselves.

Leonard Blackman points out that mildly retarded students from disadvantaged homes, specifically urban slum areas, are "often undetectable outside the intellectually and verbally demanding classroom environment" (Blackman and Maizes, 1970), whereas culturally advantaged children are "frequently visible before, during and after school." Blackman feels the latter group tend to overachieve academically but their "poor social performance and great dependence on protective and status-conscious parents make them a poorer risk...for succeeding in...vocational preparation."

This kind of disparity raises yet another question in education - namely, is it the job of the schools to reflect society or to shape it? In other words, if children are unable to succeed in school, but do fine everywhere else, what is the school doing for (or to) them? Conversely, if those students who succeed well in school are still not prepared for success in society, what benefit have they derived from the school? While this is an area of concern to education in general, it seems to be even more important to special education, where the differences are even more obvious. Certainly, if social and vocational competence in adults are more important than academic

competence in children, then something needs to be changed within the structure of secondary education to enable children to meet the larger social goals.

One of the problems in determining the best way for the school to prepare students for their future in society is that it has become virtually impossible, in our changing times, to predict what society will require of them in the future. The problem for the special educator is extraordinarily acute. Decisions are being made not only for a population characterized as "deficient" or "dependent," but also in a society that equates human value with market value. (Weaver, 1971) Weaver points out that often deficiencies and inadequate preparation for adult roles must be dealt with at a time when the long-term needs of the learner are difficult to foresee. Clearly, if we cannot improve our ability to tell the future, we must compensate by altering education so that it is less self-serving and more applicable to whatever may come.

Not only are goals unclear, but theoretical frameworks for viewing retarded children are many and varied. The welter of terminology and differing emphases in dealing with retarded children often make it difficult to gain any aid in the development of meaningful programs from the literature. Even when our focus is defined, the approaches to be used are vast, and decisions about methodology become as difficult as decisions about goals. No one specific frame of reference can yield complete comprehension of all the aspects of the child, his behavior, the school, and the society. However, once we accept the multiplicity of problems and the many approaches possible for finding solutions, we can become excited by the possibilities for new ideas and approaches.

On the assumption that we can continue to expect support in programming for exceptional children (although Weaver makes an interesting case for this not being true), it behooves us in planning for the future to explore the past and question the present in policy for retarded children. The purpose of this paper is to apply the results of some of this exploration to the development of an innovative program for secondary-level mildly retarded students.

CHAPTER I

HISTORICAL PERSPECTIVE

Although education for the mentally retarded has always beer accompanied by statements of lofty objectives, what has actually be provided in preparation for working and functioning in society has been of questionable value. Hungerford, reviewing the history of t special class movement, for example, noted that the first programs a reaction to the pressures of schoo misfits, rather than a planne attempt to meet individual differences: "The wheels of humanitaria never grind as fast as when they are aided by utilitarianism" (Hungerford, 1964). Early classes for slow students were known as "subnormal rooms" and stressed useful skills. Big looms character most of them. Sewing, cooking, and simple carpentry were taught. attention was given to academic skills, and social skills were tau mostly by precept and practice, if at all. For many years the syst preparation of the retarded for adult adjustment was secondary to maintenance of discipline in the special classes and the relief of pressures on the rest of the school.

More recently, there have been some remarkable changes in generally prevailing attitude toward the status and disposition of retarded. Instead of emphasis being placed on the negative aspect disability with the assumption that the retarded adult must be exc from normal social and economic activity, the emphasis is now bein on the positive resources of the individual for a life as independ normal as possible (Cobb, 1967).

Work has traditionally had a definite place in the overall life preparation of the maturing child. Originally, preparation for work took place within the family and the apprenticeship system. Schools saw their role as preparing students for college and intellectual pursuits. However, as society has changed, schools have reassessed their purpose and tried to provide preparation for work, even some work experience, as part of their program. The first effort to teach about work is usually credited to Cincinnati, Ohio, which established a public school work-study class in 1908 (Hunt, 1957). The first conscious attempt to provide vocational education for the retarded came much later, probably in the late 1930s or early 1940s when the New York City schools began the program known as "occupational education" (Hungerford, 1964). The growth of school work-experience programs, however, has been slow, and only quite recently have large numbers of them emerged.

Vocational education for the mentally retarded today reflects the turmoil and uncertainty of any program that is relatively new, particularly when that program has not developed from a clear philosophy nor been launched from a base of extensive, well-tested psychological, sociological, or pedagogical knowledge (Johnson, 1962; Simches and Bohn, 1963; Sparks and Blackman, 1965; Stevens, 1958). Vocational education for the mentally retarded - whether it be called occupational education, prevocational education, work-study, cooperative education, or any other name - is an entity that is still in a formative stage (Viscardi and Gentile, 1967).

In order to get a better idea of what currently exists in the education of mentally retarded adolescents in the way of preparation for work, let us examine some of the kinds of programs available.

In some schools, particularly in small communities, re students have been placed in regular classes and given the tr subjects. In some instances, where a "track" system exists, students are in the lower track, where at least the pace is s demands lower. The curriculum, however, is still academic an leeway for training in vocations. This remains true even whe classes are available, as the remediation is only in academic

Where special classes are provided in the high schools, a large percentage being served by one teacher, specifically retardation, but unaware of the requirements and standards fo Although students may leave the special class to go to regula home economics, physical education, and so on, most of the ti the special class where the goals are mostly academic, with s social skills, but very little on vocational training.

Many observers have attested to the inadequacy of suc (Binzberg, 1960; Ribicoff, 1961; Havighurst and Stiles, 1961; Matthews, 1960; Kolstoe and Frey, 1965). Although there are with special education, most observers feel that the emphasis traditional curriculum, rather than on preparation for work, drawback to most special classes.

Several approaches, under a variety of names, have come answer this major objection. "Occupational education" tries vocational content into the curriculum early in the school pr it throughout the educational process. "Occupational educati sponsibility for giving vocational competency, but it also ac for the total life preparation of the retardate" (Hungerford,

The concepts underlying occupational education are based on the philosophical area of life adjustment and the "persistent life approach" of general education (Stratemeyer, et al., 1957). However, although the term "occupational education" is frequently applied to programs that have adopted bits and pieces of the philosophy, consistent emphasis on life adjustment is, infrequent (Simches and Bohn, 1963). Accordingly, occupational education often describes a school's overall direction, but does not specify curriculum content. Because of this, much of the impact and original meaning of the term have been lost (Gorelick, 1963).

More closely related to the traditional concept of vocational education than "occupational education" is training for specific jobs. Generally, specific vocational training has not been favored by special educators, who feel that vocational demands are impossible to predict and the specific skills of most jobs can be learned after employment. In spite of this, many such programs do exist, particularly in institutions for the retarded that depend upon the labor of employees for the maintenance of the institution.

Public schools also offer specific vocational training, although less frequently than institutions. Often, such training emerges from the vocational needs of a community. For example, special students in Gloversville, New York, the "glove capital of the world," are trained in the skill of making gloves for which employment opportunities are excellent. Frisbie and Conrey (1963) describe the results:

> "In the skill of making the gloves, the retarded girls can frequently equal or even excel normal girls. However, the task of making them understand such things as wage scales, for figuring weekly pay, producing quantity as well as quality set by fixed standards, and meeting daily social situations requires far more time and patience on the part of the glovemaking and special class teachers..."

A similar program is in effect in Leominster, Mass., a center manufacture of plastics. This program is jointly sponsored by school system and the Massachusetts Rehabilitation Commission as its goal "the twin aims of training mentally retarded young for work careers and filling an important local employment nee (Harding, Singer, and O'Hara, 1964).

Posner (1966) describes as "a great breakthrough" a pi train retardates as laundry workers undertaken by the Institu dustrial Launderers, the Bureau of Apprenticeship and Trainin U.S. Department of Labor, and the Vocational Rehabilitation A

While specific vocational training programs may be ef a strong job market exists for the skill being trained, there serious questions about their overall efficacy because they d the retarded for 1) social behaviors that may make the diffe his success or advancement on a job; 2) the eventuality of h phased out or changed; 3) transfer to other jobs requiring s different skills; and 4) handling his income, family and soc other requirements for optimum existence in society.

Some of these objections to specific training are ans concept of general vocational training. While general vocati programs vary greatly in content and organization, they gene to the notion that the retarded can be prepared for work thr to many vocational activities and contact with jobs commonly tarded. Highly developed programs introduce prevocational c junior high school and move sequentially to a high school pr

work experience, either in or outside the school. Other programs use vocational themes to motivate the study of academic topics adapted from the general curriculum. Variations on this theme are numerous and range from a kind of "teacher-psychotherapy...in which the child's inhibitions to satisfactory living are eliminated or reduced through mutual recognition, analysis, and understanding of his patterns of interpersonal relationships" (Brown, 1955) to programs where for two years students are placed on full-time jobs in the community, reporting to the teacher or rehabilitation counselor periodically for specific assistance, progress reports, or counseling.

An early example of the use of work as a source of motivation and the subject matter is Potts's (1950) description of the Michigan program. The recent expansion of special secondary school programs has increased the difficulty of assessing new developments and hampered the charting of general trends. In one attempt to define the status of high school programs, Allen and Retherford (1955) reviewed the different programs in existence. These included special classes (integrated and segregated), vocational or trade schools, special class centers, special schools, slow sections, and the special education consultant service. Work-experience was not found to be a self-inclusive program but may be incorporated into any of the other plans.

Over the past fifteen years there has been a steadily increasing interest in the development of high school work/study programs for the educable mentally retarded. The underlying rationale of these work experience programs has been to provide retarded high school pupils the kinds of experiences necessary for a successful transition from the school environment

to adult life in the community. One of the most important concerns of the programs has been to structure prevocational experiences in such a way that the likelihood of adult vocational success is enhanced (Halpern, 1972). Syden (1963) gave attention to the specific provisions of work-study programs described in the literature published from 1952 to 1962. He felt that the work orientation was a powerful motivator that should be included throughout the entire education program to provide a basis for curriculum revisions decisions dependent on the success of graduates. He also pointed out that special education and vocational rehabilitation have unique roles in the process and should both be involved.

This thinking is in marked contrast to the thinking of some special educators, who feel that vocational training of the retarded is a school responsibility and should be assigned to the special education teacher (Fudell, 1957; Miller, 1954). Cooperative work-study programs seem to be on the rise, however. Mackie (1959) and others have reviewed programs and compared programs established in Baltimore, Cincinnati, Detroit, Jacksonville, Lansing, New York City, Santa Barbara, and Sidney, Nebraska. Cooperative work-study programs are quite diverse, even when guidelines are agreed upon. Although few problems are reported and evaluation is seldom considered, it is possible to determine that administrative concerns with such programs overshadow curriculum concerns. Whether this will continue to be true as problems related to the management of students outside the school, transportation, insurance, wages, and so on, are solved, remains to be seen.

As established programs have grown, they have become more complex. This is particularly true in larger cities. Rochester, New York, reports work-study programs that utilize several extensive in-school job training areas designed, equipped, and operated exclusively for retarded and slow students (Burchill, 1962). New York City reports work training programs in the regular high schools, special schools, and a sheltered workshop (Clapper, 1966; Goldstein, 1962; Lynch, 1959). New Haven, Connecticut, operates a work-study program that involves the active cooperation of the school system, two state agencies, and two private agencies (Peters and Rhode, 1962).

Statewide interest in providing work-study guidelines to local school systems is another recent trend. Several states have published and distributed booklets to their secondary school teachers or have set forth guides in state education periodicals. Texas, for example, supports a plan assigning a school work-study coordinator to teach a work experience program (Eskridge and Partridge, 1963). Oregon has recently conducted an evaluation of work-study programs in the state through the Rehabilitation and Training Center in Mental Retardation at the University of Oregon (Halpern, 1972).

As work-study programs proliferate, new developments have emerged in specific programs. For work-study purposes, the IQ range has become more flexible. Younie (1964) described a work-study program for trainable mentally retarded in an institution, while Capobianco and Jacoby, (1966) felt the upper limits should be extended to an 84 IQ to provide services to students originally classified as slow learners and left to their own devices. Kokaska (1964) reported on four years of experience with an in-school work-study program concluding that the guidelines regarding who

should participate should be flexible because some sophomores are ready and eager to work in the community, while some seniors are not.

A number of practical problems have been described by Taylor (1964), including getting parental support, developing suitable curriculum, obtaining insurance coverage, and establishing feedback from job stations to the school. In one of the most definitive descriptions of a school work-study program, Kolstoe and Frey (1965) also gave attention to the administrative, curriculum, and cooperative problems that may arise. Some of these questions were answered, in part, by an experimental program described by Davis, Ribbans, and Rickert (1965). This program used casework services to improve the relationship and cooperation between the school and the home, funds and time for curriculum improvement, a vocational rehabilitation counselor for job supervision, a person to act as job-finder for placements, and the development of specific project evaluation criteria. In spite of this, however, many problems continue to impair the effective implementation of work-study programs at the local level, and the ability or disability of each community to solve problems plays a large part in what kind of program emerges.

Although the concept of exposure to work as a real entity as a vital part of a child's education has great merit, it remains to be seen if exposure in and of itself is sufficient. As work-study programs are compared and evaluated, we would expect to find them more effective than other forms of education for secondary-level retardates. Whether they are as effective as they could be, however, is a serious question.

FOLLOW-UP STUDIES

With or without special programs of vocational education, the retarded do grow up, aspire to, and achieve work status in society. The exact manner in which they determine or reach their vocational destiny is not known. Nor is information available permitting educators and rehabilitators to plan what they consider to be the most effective vocational preparation programs. There is, however, a growing body of literature that begins to describe the vocational adjustment of the retarded, question their vocational interests and capabilities, and isolate the factors that will allow more accurate prediction of job success and stability.

One of the most obvious and apparently logical methods of determining how effective an educational program has been in preparing the retarded for their vocational future is to determine the relative ability of its graduates to succeed in areas considered important. One of the problems in this method is the definition of importance. A number of special education programs have used follow-up studies as an evaluation device. These studies tend to define importance in terms of what the school expects, or considers important. In some ways, these studies become self-fulfilling prophecies, for the schools set the goals, teach them, and then see if they have been learned. Since the goals assessed are those taught, the results should be favorable. Not answered, however, is the question of whether the goals were appropriate in the first place.

Even studies that do attempt to define importance in terms of the student suffer from the absence of reliable criteria of adjustment in the community. Criteria have varied greatly ranging from a simple return-nonreturn dichotomy to more global and subjective evaluations of adjustment.

Despite the exhaustive amount of literature in this area, there are as yet no validated criteria of success; one researcher's success is another's failure. Moreover, attitudes of professional and lay persons toward the potential for social and occupational adjustment of mentally retarded persons has often led to gross oversimplification of the criteria for success. Speyer (1964) has pointed out that overprotection by parents and professionals has served to hinder the social integration of retardates. He also mentions that society's misconception of the potential of the mentally retarded has decreased their success because they are often not given the opportunity to prove themselves.

Farber (1968) has argued that the mentally retarded belong to America's socio-economic "surplus population." He uses the term surplus in an organizational sense, meaning that there are more people than slots in the "machinery of social organization" and that the values of organizations take precedence over the needs of workers. Farber contends that mental retardation in itself is usually not sufficient grounds for membership in the surplus population but, since there are many other individuals who also qualify, retardation is used as a justification rather than an explanation of the failure of retardates to make a satisfactory adjustment in our society.

Bearing the above qualifiers in mind, there is still merit in looking at the postschool adjustment of retardates in order to begin to delineate the variables that seem to be important and to use these to make decisions about new secondary-level programs.

Many of the follow-up studies, particularly the earlier ones, have dealt with institutionalized populations. In looking at them, we must

remember that most institutional approaches to education were of the specific vocational training kind, which might have affected the results. Furthermore, these studies did not employ controls nor attempt any variable manipulations. That is, they were primarily concerned with variables present within the retarded person, while neglecting to examine those variables inherent in the training, placement process, work situation,and community. Drawing upon case histories, these studies reported frequencies of success and failure with some attempt to describe their differentiating characteristics. It cannot be assumed that the variables leading to socio-vocational adjustment are inherent in the criteria for institutional discharge. Some factors, while contributing to the probability of release from institutional care, have a negligible effect on the probability of successful postrelease adjustment (Windle, 1962).

The first published follow-up study of the mentally retarded was that of Fernald (1919), who examined the histories of 646 discharged patients over a twenty-five-year-period. Although the rate of recidivism, especially among females, was very high, it indicated that many retardates could adjust to community living, be gainfully employed, and make a contribution to their community. Fernald found that the main characteristics of those who made successful adjustments in comparison with those who did not was the amount of support and supervision provided by family and friends.

Fernald's findings tend to be supported by a twenty-year follow-up study by Foley (1929). Using multiple indices of success (e.g., occupational information, marital status, and reports from police and social agencies), Foley reports that of 636 discharged patients observed, 553 lived in family situations of average or above average quality. He interprets these results

to mean that familial support may be used as a criterion for discharge as well as a predictor of future success. Edgerton (1967) also found that former patients who made successful adjustments did so mainly because of their reliance on what he termed a "benefactor."

Other studies by Matthews (1922), Storrs (1924), and Little and Johnson (1932) have demonstrated, respectively, that 96 percent, 75 percent and 80 percent of retarded populations sampled made successful community adjustments. In a more recent study, 128 orphaned or abandoned persons were discharged from Elwyn Institute to work in the community after receiving comprehensive rehabilitation services. They had spent from two to forty-nine years in an institution, the average being fifteen years, and they ranged in age from twenty to fifty-five. IQs ranged from 45 to 80 and averaged 75. During the four years of the study, none had to be re-institutionalized and follow-up at the end of the four years found more than 90 percent employed (Rosen, 1967). Wolfson (1956) reviewed the socio-econom adjustment of 163 male and female mildly retarded adults twenty years after their discharge from a New York State institution. The study indicated a wide range of adjustment from a high to a satisfactory level in a large percentage of the group (57.5 percent of males and 70 percent of females) to various degrees of maladjustment in the rest. It appeared that successful adjustment was made possible by the personal resources of the retardates themselves.

There have been also a number of parallel follow-up studies in Engl and Canada. Collmann and Newlyn (1956), investigating the employment poten of the mildly retarded, found that 61 percent were successfully employed, 11 percent were partially successful, 16 percent were unsuccessfully emplo and 12 percent had never sought employment. In Canada, Grant (1956) and

and Lambert and Racine (1959) found that 60 - 70 percent of the institutionalized retardates sampled attained successful community placement.

Thus far it would seem that the retardate has a better than average chance for successful adjustment. Other researchers, however, have found a much lower rate of success. Using a sample consisting of 136 male and female retardates, Town (1931) found that only 5 percent met the multiple success of criteria of self-support, independence from welfare agencies, and no court record. Moreover, of the 10 percent of the males and 58 percent of the females who married, nearly all were "unstable and poorly adjusted." Somewhat more favorable results are reported by Johnson (1946). Of a total sample of 275, Johnson found that 46 percent and 67 percent of females and males, respectively, made fully successful adjustments, 17 percent and 24 percent failed completely, and the balance of 37 percent and 9 percent made marginal adjustments.

During the Depression years, two and one-third times more retarded than nonretarded subjects were on relief. In 1953, Charles did a follow-up study on the same group and found that, although they were better off than before, still only 66 percent were totally self-supporting. Kennedy (1948) found in a study of the social adjustment of retardates that a larger percentage of the retarded subjects as compared with the controls were unemployed, married, on relief, had come to the attention of the police and courts, or had parents who had records of legal or moral convictions. A smaller percentage owned their own homes, participated in community recreational activities, or had served in the military. The most striking difference between retarded and nonretarded subjects in all studies was in the type of occupational and

educational achievement.

In addition to follow-up designs, other researchers have employed other strategies in their studies. Ordahl (1919) compared the work output of 48 female institutionalized retardated workers with that of normal female workers and found the two groups to be comparable. In another control versus treatment study, Lee, Hegge, and Voelker (1959) compared the adjustment characteristics of two groups of retardates (special education class versus nonspecial education class) and a control group of normals. Although the two retarded groups were not significantly different from each other, they were different from the control group, having poorer social and occupational adjustments and higher rates of illegitimate pregnancies than normals. Baller (1936), in studying the present social status of adults classified as retarded when in school, found from three to seven times more breaches of law among the retarded than among the nonretarded controls.

Yet another source of research evidence comes from a number of studies made of the adjustment of retardates to military service and war-time labor force. Butler (1945) found that of 147 retardates studies, 48 percent made unsatisfactory adjustment to military service and 20 percent made good adjustments (no information was available for the remaining 32 percent). With regard to war-time employment, almost 50 percent of those studied were steadily employed over a peri of twenty-seven months. Somewhat different findings are reported by McKeon (1946). Following up the military service of 210 mentally retarded boys from special classes, McKeon found that only

39 were rejected and 113 were in active service. As summarized by Cobb (1969), these studies demonstrate the employability of retardates under certain conditions. Retardates can function with a high probability of success in a structured routine provided in the military and in some industrial placements. It is possible, however, that the findings of these studies were artifacts of the extraordinary demands of the military and labor force, so, generalizability is extremely limited. Unfortunately, most researchers in the field have neglected to consider the fluctuations of the job market as an extraneous variable.

One recent attempt to determine the effect of general unemployment on the employability of the retarded is that of Halpern (1972). Halpern compared the rate of employment of retardates with that of nonwhites (representing another "surplus population," Farber, 1968) during two different years. The populations were drawn from the state of Oregon, as were the unemployment figures. In 1968, when employment was high, the retarded were unemployed at a rate of 20 percent, while the comparison nonwhite group was 24 percent. In 1969, however, when the level of unemployment in the state was high, the retarded were unemployed at a rate of 46 percent and the nonwhites 31.6 percent. These figures indicate that when there is a general economic decline, there will be a parallel decline in employment for the retarded. This comparison suggests that the mentally retarded are a more handicapped group than are nonwhites in general, and an increased level of general unemployment has an especially harsh impact on vocational opportunities for the retarded. In a further discussion of this issue, Halpern states that although new retarded workers will find it difficult to obtain jobs when unemployment levels are nigh, retarded workers on the job will have a fairly good chance of retaining their employment even when the labor market declines. 24

While the follow-up studies discussed so far have dealt primarily with institutionalized retardates or adults whose education was unknown, there are also several studies dealing with former students of public school special class programs, where the educational treatment is known. Since special education has developed tremendously over the years, we will only look at some of the more recent studies involving students who received an education not unlike that being offered educable mentally retarded students today.

In a survey of fifty former EMR students, McFall (1966) found that thirty had odd jobs doing babysitting or housework, eight were factory workers, and three worked in a family business. Nine were unemployed. Only 20 percent had worked steadily, and 26 percent had never worked. On the basis of these findings, McFall concludes, "There is need for providing the educable mentally retarded with a more extensive program It appears that many of them might become better adjusted working members of the community had they been prepared with occupational information, vocational knowledge, on-the-job training and aid in finding suitable work, with continued counseling until they had adjusted to their situation" (McFall, 1966).

Peterson and Smith (1960) reported a comparative analysis of the civic and occupational adjustment of a group of EMR adults and a parallel age group of normals. The adjustment of the retarded adults was inferic to that of the others in several areas. The major differentiating factor was income, with the median wage of the retardates only 61 percent of the normals. The retarded group also were often living in substandard

homes, had fewer homeowners, were less frequently married, but had a higher divorce rate, participated less in civic organizations, and had a greater number of legal offenses.

Dinger (1961) did an extensive follow-up of alumni of the Altoona, Pa., special education program. Of the 80 percent who responded to a mailed questionnaire, 59 percent were employed, 22 percent full-time housewives, and 13 percent unemployed. Forty-seven percent had received some additional training since leaving the special education program, and 65 percent had served in the military. The first jobs they secured were chiefly unskilled and 28 percent were fired, quit, or laid off these jobs. Fifty-nine percent got their present job through the efforts of friends or relatives. The average wage earned at the time of the study was $3,327. Although this study seems to indicate that the special education received by these students served them well, it should be noted that the sample represents only slightly more than half of the original random sample selected. The remainder could not be located or did not answer the questionnaire. It is likely that the picture portrayed by this group would be far less rosy.

A follow-up survey was conducted of students who had been in special classes for the retarded in New York City schools. At the time of the study the subjects had been out of school five to seven years and were in their mid-twenties. During the week they were interviewed, 59 percent of the males and 29 percent of the females were employed. Twenty percent, however, had never held gainful employment, while 29 percent had been "permanently employed (Tobias, 1970); only 2.6 percent held "skilled" jobs. There was a disproportionate number of nonwhites among these former students, as well as a large number from families either on welfare (52.5 percent) or who had been involved in court actions (43 percent). One fourth of the male subjects

had been involved in some criminal action themselves. Family disruption was a factor in 56 percent of the cases (70 percent among black families).

Although Tobias (1970) found that only about 20 percent of the population was known to the Division of Vocational Rehabilitation, a significant number of retardates do require and use some further training, counseling, or placement agencies after leaving school. One that serves former students in New York City is the New York Federation of the Handicapped. At the same time as the above study (1967), the Federation reporte that of their retarded clients 35 percent had worked since leaving school but were unsuccessful, 20 percent had stayed home, and 15 percent searched unsuccessfully for work. Counselors estimated that 92 percent of the clients lacked job-hunting skills, 83 percent suffered from limited education, 72 percent had poor work habits, and 47 percent had severe emotional problems.

The studies cited so far have dealt with educational programs that sometimes included work experience, but often did not. Halpern (1970) has looked specifically at the graduates and partially served students of work-study programs throughout Oregon. With twenty-nine projects providing information, the range of employed pupil-clients who had completed a full-week study program was from 31 to 100 percent with a median of 75 percent. In looking at the students who did not complete the entire work-study program, the range of employment was 14-92 percent with a median of 52 percent. Halpern concludes from this that students who completed the course of work-study were more successful in securing employment than partially served students. Furthermore, the median of fully-served students is quite similar to the employment statistics for nonwhites of the same ages. As this level is still well below that of th

population in general, it is reasonable to speculate, says Halpern, that this level of achievement is approaching a zenith for the retarded, whereas the potential for nonwhites has only begun to be tapped.

As recently as 1972, Gozali reports on an interview follow-up of boys who had participated in a work-study program for one or two years and were now out of school. Of fifty-six former students who were located and interviewed, 25 percent were unemployed. Fifty-five percent were not married and lived with parents or guardians, but 45 percent were married and maintained their own households. The average income of the employed population was $3,145 per year. These results correlate very highly with other follow-up studies over the years, even those in which work-study was not a factor.

A more complete review of these studies and the many others available reveal that while follow-up studies are somewhat useful in gathering information about the relative success or failure of a specific program's graduates, one cannot isolate precisely the factors in the preparation process that have a direct relationship to the adjustment reported. Follow-up studies are instrumental in improving the techniques of follow-up, but are much less successful in suggesting program improvements for the mentally retarded. After commenting in some detail on a number of follow-up studies conducted with retarded adults who had been institutionalized, Goldstein (1964) noted:

> "Considering the data presented in the foregoing studies, only one broad generalization may be derived with any degree of confidence, that is, the probability is that the majority of higher grade mentally retarded inmates of public institutions will make a relatively successful adjustment in their communities when training, selection, placement, and supervision are all at an optimum. Generalizations in terms of age, sex, mental status, length of institutionalization, and prior record would be hazardous because of the marked differences in the samples studied, the absence of relevant data in some cases, and the obscure nature of the data in others."

In a similar vein, Cobb and Epir (1966) comment on the predictive information available from studies conducted with graduates of public school special classes:

> "Similar results have come from follow-up studies of non-institutional retardates with the same general mixture of agreement on broad generalizations and confusion in detail. It seems evident that descriptive and comparative accounts of the adult adjustments of the retarded reflect in considerable measure differences in the populations sampled, in the geographical and other environmental loci, and in the period of social history in which the investigation has occurred. The adjustment process appears to be strongly influenced, not only by characteristics of the person and by the types of training and other experience he may have had, but also by the characteristics of the social scene in which the attempt to adjust takes place. Consequently, the predictive variables that prove significant in excellently designed research investigations may have little value when applied in the rehabilitation procedures at later times and in other places."

As might be concluded from the previous comments, follow-up studies can be used as reference points with which to build a global picture of the adult adjustment of the mentally retarded, but cannot be used in decision-making about a particular program or an individual child.

In the past two decades, literally hundreds of studies have attempted to identify and measure the predictors of successful outcome in retarded persons. But, unfortunately, we are as yet unable to use this empirical information in any precise way in guiding our practice. We are unable to say, with respect to the individual retarded person, what the precise probabilities are of any specific outcome of any specific program of treatment.

Perhaps one of the most talked about and written about variables is the intelligence level of the retardate. Assuming that conventional

measures of intelligence are valid and reliable indicators of intellectual functioning, can IQ predict social-occupational adjustment?

In a series of studies involving mildly, moderately, and severely retarded subjects, Storrs (1924) found that at all levels the proportion of success to failure was in a ratio of three to one. Similarly, in the Reynolds and Stankard (1960) study the type of retardation did not discriminate the successful and unsuccessful. Other studies have found measured intelligence within the traditional educable range a relatively unimportant variable in vocational adjustment.

Regarding the critical level of intelligence below which adjustment is minimal, there are varied findings reflecting varied criteria references. For example, Ferguson (1921) reported a gross relation between IQ and employment with an IQ of 45 being the floor. Gunzberg (1957), however, reporting on a training method emphasizing social responsibility and self-adjustment, found a majority of success including a proportion with IQs below 50. The effect of level of retardation is perhaps best demonstrated in the Clarke studies (1955, 1957, 1958) in which it was shown that if appropriate training is provided, low initial ability is not related to level of performance. According to Clark, "the main difference between imbeciles and normals on simple tasks is not in the end-level but in the time required to achieve it."

The studies thus far have been designed to establish intelligence as a predictor of adjustment. There are also other studies which, although not primarily concerned with intelligence as a dependent variable, report findings that have bearing on this issue. Here again the results tend to

be consistent. Although Ordahl (1919) reports a linear relation between earning and IQ level, other researchers (e.g., Wallin, 1922; Hegge, 1944; Coakley, Harold, 1955) have failed to find any relationship between IQ and income.

In comparing the intellectually superior group of alumni of New York City special classes with a clearly inferior group from the Associatior for the Help of Retarded Children, Tobias (1969) found that the two groups achieved an equivalent success ratio. The results are much the same when IQ is related to industrial capability. Some conclude that IQ score, per se, can not be regarded as reliable predictors of occupational success or failure, regardless of the IQ scale used. Although there does not seem to be a cause and effect relation, it would be unwarranted to negate IQ as an important variable. There does seem to be a positive correlation between vocational adjustment and IQ as evidenced by a recent survey by Saenger (1967). Using a test-retest paradigm, Saenger found that most of the employed TMRs demonstrated a gain of more than five points in IQ in a retest and that the majority of unemployed TMRs scored more than five IQ points lower on the retest than they had during their school year.

The sex and age of the retardate have also been considered as possible predictor variables. Here too the results seem contradictory. Kephart and Ainsworth (1938) found that males were more often self-supporting and had fewer court convictions. However, in studies by Reynolds and Stankard (1960),Brandon (1960),and Tarjan,et al.(1960), sex was not a discriminating factor. In fact, Bijou, Ainsworth, and Stockey (1943),using a sample of 101 girls, report results strikingly similar to studies mentioned

earlier using male samples. On the basis of a five-point rating scale of adjustment: 70 percent were rated in the upper three categories as positively adjusted and 30 percent in the lower two categories as negatively adjusted. Tobias (1969), however, found that retarded women are less likely to enter the labor market and, if employed, are less likely to sustain employment. Retarded males were "currently employed" at twice the rate of retarded females. More than one-third of the women without jobs had a history of previous employment but an equal percentage had never worked since leaving school. Retarded women who had never worked outnumbered men by a ratio of 3 to 1.

The relationship between age and success of adaptation has been examined with regard to optional age of entry into a program and optimal age of entry into occupational areas. In studies by Wolfson (1956), Tarjan, et al. (1960), and Reynolds and Stankard (1960) age of entry was not predictive of long-range adjustment. However, Whitney (1948) based on population at Elwyn, did find a positive correlation between age of discharge and success. In particular, Whitney indicates that prognosis for adjustment is least favorable before age twenty-two with age twenty-seven optimum for full emotional maturity. Deno (1965) found in a study of school dropouts of marginal intelligence that some relationships could be statistically demonstrated as population characteristics. Generally, those students who ended up in regular employment tended to be somewhat older, had spent more time in school, got higher behavior ratings from their teachers, higher laboratory performance scores, and were placed on jobs more times than those students who ended up unemployed or working in marginal or sheltered jobs.

The relative unimportance of academic competencies is also supported by empirical evidence. Keeler (1964) concluded that the ability to interpret

and follow verbal directions rather academic knowledge appears to be the main indicator of job success. Similarly, Miller (1965) and Kennedy (1966) found that retarded persons with very minimal reading and arithmetical achievement are able to adjust well to independent living and competitive employment situations in the community. Cowan and Goldman (1959) found no relationship between academic achievement and employment. Number of years in school also seemed to have no effect. Tobias (1969) reports the reading levels of his two groups were almost identical - 4th grade. (If a fourth grade reading level is the average level achieved by EMR students, it is not surprising that reading level does not discriminate - retardates in general do not real well enough to use reading in employment).

Kolstoe (1961) examined differences between employed and unemployed mentally retarded males, adults who were former clients of the Employment Evaluation and Training Project. He also found no relationship between school achievement and employment. In fact, there was a slightly higher academic achievement noted among those who were unable to seek employment. He also found 1) fair or poor health seemed to interfere with the chances of the client becoming employed, 2) no relationship between IQ and employability, 3) number of years in school seems to have no effect on the employability of clients 4) those who made the best appearance were most likely to become employed.

The employed group was consistently superior to the unemployed group in tasks involving assembly, sorting, manipulation, packaging, and the use of hand tools. In actual work situations the employed group was consistently superior in the understanding of the work, the quality of the work, and showing initiative. The group that became employed not only had the

skills to begin with to a superior degree, but were able to use these skills well in a work situation. The employed group was able to mix well with the other employees and with the employer and concentrate their energies on the tasks at hand.

In other attempts to determine factors related to success, Brown (1952), in a study of twenty-six reinstitutionalized females from vocational leave, found that 46 percent were brought back because of "physical disabilities, old age, or incompetence," 15 percent because of unhappiness, 4 percent because of family interference, and 35 percent because of misconduct. O'Connor (1957) felt that the major reasons for failures among sixty subnormals given a building site placement were sickness or physical hardship and disciplinary dismissals because of "instability."

Many studies have identified personal traits characterizing successfully employed retardates. Some of the important characteristics emerging were a favorable personal appearance, a pleasing personality, acceptable social behavior, and good work attitudes. Cohen (1960) analyzed reasons for lack of vocational success among EMRs and found that about one-third of the failures were caused by difficulty in community adjustment rather than in job adjustment. Thus, job skills alone are no guarantee of success. Although Cohen's findings are concerned with adolescents trained in residential institutions, similar reasons for failure have been cited for EMR special class children by Peckham (1951) and Phelps (1956).

There have been various research findings indicating that the retardate's ability to adjust to society is hampered more by his ineptness in the social area than in deficiencies in specific vocational skill areas. As early as 1951, Peckham highlighted the importance of extrapersonal variables and accessory job skills (personal-social attributes) in the vocational

adjustment of the retarded. He found...that lack of acceptance by fellow workers was the most important single problem in job adjustment. Ridicule by co-workers was a frequent basis for job termination. Peckham also found a general lack of social sophistication reflected in a disregard for punctuality, improper dress, poor deportment, a lack of initiative, and unrealistic aspirations and assessments of ability. Similarly, in analyzing the reasons for occupational failure as reported by supervisors, one study found that only 6 percent of the EMR employees lost their jobs because of an inability to perform the skill aspect of the work. The remaining 94 percent were fired for social inadequacies (e.g., poor attitude, poor punctuality, and excessive absences).

Warren (1961) attempted to evaluate the importance of certain factors to the employment of the mentally handicapped. On a scale of sixteen specific and three general factors in the categories of personality and social adjustment and work habits and efficiency, eleven of the specific and all three of the general factors were rated significantly higher for the group that was employed than those who were unable to get or keep jobs. Cohen (1960) found that employers gave as their main reasons for not hiring retarded individuals personality clashes with employer or co-workers, pilfering, and unacceptable work performance. The employers did not make their judgments based on retardation or lack of intelligence.

Collman and Newlyn (1956) found "character defects" the most frequent (51 percent) because of failure in employment for thirty-five ex-pupils of special schools, with almost half of these failures caused by unreliability on the job. Inefficiency in work accounted for another 26 percent of the failures, and temperamental instability for 11 percent.

Windle, Stewart, and Brown (1961) found that 92 percent of the patients released from Pacific State Hospital on vocational leave failed because of some action on their part. These actions included: 1) antisocial behavior, sexual misbehavior, pregnancy, minor antisocial action - 14 percent 2) inadequate interpersonal relations, jealousy, disrespect, quarrels, domination - 26 percent; 3) inadequate work performance; inability to take orders, anxiety, poor self-evaluation - 30 percent. Of those on home leave, 63 percent failed because of antisocial behavior.

In examining differences between employed and unemployed males, Kolstoe (1962) thought that it was apparent that the group that presented the best physical appearance was more likely to become employed. In addition, certain personality and social characteristics, as rated by the employers, seemed to be important in job retention. There seemed to be great stress placed on such chacteristics as cheerfulness, cooperation of the client with the supervisor and other employees, respect for the supervisor, ability to mind his own business, being on time, and showing initiative. It is, therefore, not surprising that professionals who are concerned with the employment of the mentally retarded in competitive industry have emphasized the development of personal and social skills, rather than the mastery of specific vocational skill (Goldstein and Heber, 1959); Collman and Newlyn, 1955).

Researchers have also considered various psychological variables as possible predictors of success or failure. Hiatt (1951) found that emotional stability was more important than intellectual level in determining community adjustment. The same finding are also reported by Harold (1955), Badham (1955),

Stanley and Gunzberg (1956), and Craft (1958). Astrachan (1955), studying the effects of group psychotherapy on the success of adjustment, found the kind of emotional disturbance to be predictive; repressed, passive subjects and those with mildly paranoid tendencies showed greatest adjustment, while schizophrenics, aggressives, and those tending to act our conflicts showed least adjustments. This seems to be consistent with the general observation that when the retardate's behavioral problems are obstrusive, adjustment is likely to be severely hampered (cf. Brown, Windle, and Stewart, 1959).

In summary, based on the present state of knowledge on the predictive assessment of retarded persons for adult adjustment, there are very few studies offering a valid and reliable basis for making anything but the grossest kind of predictive evaluation. As most researchers have suggested (c.f. Goldstein, 1964; Cobb, 1969), success or failure is not simply inherent in the nature of the individual but is a result of a complex interaction betw intrapersonal, environmental, and societal variables. One of the major probl in determining success variables is the lack of criteria for the specificity of adaptive behavior.

In summarizing and drawing implications from his very thorough revie of prediction studies, Cobb (1969) presents a series of steps to be followed in ameliorating the state of prediction research and, hopefully, the fates o the retarded. "It becomes apparent, then, that the prediction research must attempt to sort out the many possible criteria for success or failure in soc adjustment, define them operationally in terms of appropriate methods of measurement, establish through factor analysis the empirical relationship a them, and relate these clusters of normative behavior to the specific socia environments to which they are relevant."

In one of the most extensive studies of success in young adult

retardates, Peck and Stephens (1964) concluded that of 158 variables they studied there are no clear-cut predictor variables - at most there are various combinations of variables associated with successful adjustment. Thus, as Cobb (1969) has stated: "It becomes a question not of who can be 'rehabilitated' in an absolute sense, but what desirable modification in adaptive behavior can be brought about in an individual case."

The fact that researchers have failed to come up with clear guidelines to effective prognosis reflects not only the complexity of the problem but also the looseness and confusion of most of the research directed towards it. Jackson (1966) and Wolfensberger (1967) have made exhaustive surveys of the literature and have questioned the conclusions of many studies designed to assess employment adjustment of EMRs. Jackson has cited the following criticisms: 1) noncomparable time periods, 2) disregard of job distribution patterns, 3) variable criteria of employment adjustment, and 4) small and unrepresentative size of samples.

Wolfensberger has criticized the basic research designs of these studies, contending that they have suffered from serious shortcomings, namely: 1) poor research design and control, 2) lack of cross validation of findings, 3) lack of confirmation of even the most tenuous results across different studies, and 4) almost exclusive emphasis on variables associated with the retarded person to the neglect of variables inherent in the training and placement process or in work situations. Windle (1962) has gone so far as to state that "the methodological flaws of individual studies have frequently been so serious as to make findings of very limited reliability and conclusions of high restricted generalizability." Clearly, the task of constructing curriculum

for the secondary level is complicated when we cannot rely on many of the follow-up studies that appear in the literature. It may be, as Cobb (1969) has suggested, that the present research has "been a prelude to more rigorous type of research." As yet, however, there is a need for more controlled research, as well as a set of absolute criteria for rating the adjustment of the retardates that would encompass areas of their social and occupational functioning.

If looking at the results of an undefined and amorphous educational program serves only to tell us that some students will meet criteria of success and others will not, it would seem logical to try to analyze various aspects of the educational programs to ascertain if different forms of "treatment" led to varying degrees of success. Many studies have attempted to compare the academic achievement and social competence of retarded students educated in special classes against those educated in regular classes. Not only do these studies suffer from perhaps even greater problems in research design than the follow-up studies, but they were even mor inconclusive. Several found that, academically, students who remained in regular classes tended to achieve better than their intellectual matches placed in special classes. These results are summed up by Johnson (1962):

> "From the studies cited, there is almost universal agreement that the mentally handicapped children enrolled in special classes achieve, academically, significantly less than similar children who remain in the regular grades. In the area of motor or manual skills, there appears to be no difference in their development. The results related to personal and social development are not in complete agreement. If the special class groups have any advantage over the regular class groups, it appears to be slight and probably not particularly meaningful."

Other studies showed children in special classes achieving as well as those in regular classes, and enjoying it more as well. Since such factors

as curriculum content, teaching methods, teacher attitudes, student background, and school placement policy are largely not considered in these studies, it is difficult to draw any meaningful conclusions from them. Furthermore, since there appears to be little relationship between academic achievement and vocational success, there is very little in the comparative studies that can be applied directly to program improvement.

A more recent type of comparison has been between the traditional special education classes and work-study programs. These, too, tend to be inconclusive. Howe (1967), for example, in a comparison of two groups of EMR young adults, one of which went through a traditional special education experience and one which had off-campus work experience in addition, found 85 percent of both groups were employed and the group without work-study was achieving as well as the group that had received off-campus work placement and supervision. In the Kansas work-study project, Chaffin et al. (1971) found that EMR students who did not participate in the work-study project were employable in the competitive labor market without the benefits of the program, although there might be some long-term benefits from the work-study experience.

After looking at the literature concerning the social and occupational adjustment of the retarded, both in school and during the years beyond school, it would appear that, until studies comparing the quality of both the educational experience and adjustment after leaving school are done, the best we can say is that the schools are still failing a large percentage of their EMR students. The evidence tends to suggest that schools may be placing their emphasis in the wrong areas. When all is said and done, we are still left with the observation made by Blackman and Heintz (1966):

> "Special educators are still faced with the task of developing educational methodologies which, when applied to the mentally retarded, will prove superior to methods in current use."

CHAPTER II

BACKGROUND INFORMATION

Ever since Fernald's study, research and experience have demonstrated the importance of social adequacy in the adjustment of the mentally retarded in society. Recent studies seem to indicate that the proportion of retardates meeting the criteria for social adjustment is decreasing as the complexity of society and the competition for jobs increase. In view of the probability of further difficulties for the retarded as society becomes even more complex and automated, educational programs that have, at best, provided marginal preparation need to be examined and changed. Furthermore, as menial jobs become unavailable and service jobs replace them, the need for workers to be able to get along with other people will become more important. Similarly, as the work week decreases and leisure time increases, the ability to function in social environments other than the job will also become more important. Yet, these are the very areas in which many retarded adults are most deficient. Even in work situations as they have existed, the determinants of success or nonsuccess were often those factors cutting across the broad areas of work, family, leisure, and interpersonal relationships rather than those confined to the technical aspects of the work scene such as the ability to operate a specific device. More and more we hear voiced the need for abilities not usually taught in the school: "You give me an honest hard-working kid and I'll teach him the job" (Wakefield, 1962).

While many authors have commented on the problems of the retarded in an increasingly technological society (Kruger, 1963; Peterson and Jones, 1964; Capobianco and Jacoby, 1966; Goldstein, 1964; Komisar, 1966; DiMichael, 1964), many have approached the problem as though what was required was more job training or work experience, coupled with renewed efforts in rehabilitation and placement.

Goldstein (1972) feels there is a necessity for the retardate to acquire more complex social learnings rather than more vocational skills or simply the social skills found in most social studies curriculums. In view of the increased socio-economic demands of society and the decline of unskilled jobs on the labor market, the retardate is forced into more complex social interactions and vocational competition.

The public school classes for the educable mentally retarded generally subscribe to the idea that they offer extensive and intensive preparation for social functioning at maturity. In fact, almost every curriculum guide and text on the education of these children lists preparation for work and adequate social functioning as a major goal of the special class. In fact, a recent survey of secondary programs throughout the country we conducted showed 94 percent of school systems list social adjustment as an objective of their program, and 90 percent mention vocational competency. Other objectives listed by more than three-quarters of the sample were living skills, self-sufficiency, basic skills, and emotional security. Academic competency, interestingly enough, was only listed by 50 percent of the sample. When asked to rank the objectives they listed, vocational competency was ranked first by 40 percent, social adjustment by 17.8 percent, and self-sufficiency by 21 percent.

While these results are encouraging, they represent only objectives, and not actual practice. These same school systems, for example, spend more time per day, on the average, on academic skills than anything else. In order of time spent, they report academic skills first, followed by on-the-job training, society-occupational skills, specific vocational skills, related subjects, and individual and group counseling. Over two hours a day are spent in academics, less than one hour on social-occupational skills.

We see, then, that the paradox that schools purport to meet social-occupational objectives still exists, yet they put primary emphasis on academics. The disparity between the two is being emphasized by the fact that research with the EMR has been directed predominantly at modes of learning, physical status, and academic achievement. Studies of social learning have dealt almost exclusively with postschool phenomena.

Feeling that it was primarily in the area of social learning that schools were failing retardates, and encouraged by USOE support and Gallagher's (1967) "unthinkable thought" that the time had come for curriculum to be developed by experts in curriculum, Goldstein (1967) began work on a curriculum in social learning drawing upon the expertise of other disciplines. This curriculum was to be developmental, sequential, and responsive to the real needs of real children. Social learning was defined as the acquisition of facts, attitudes, and experiences that form the social and cultural requisites essential to functioning as a member of society.

Now, after the successful development and field-testing of the primary and intermediate levels of the Social Learning Curriculum, the

Research and Development Center in Mental Retardation is ready to embark upon the POSVAP (Problem-Oriented Social Vocational Adaptation Program) for junior and senior high-level EMR students.

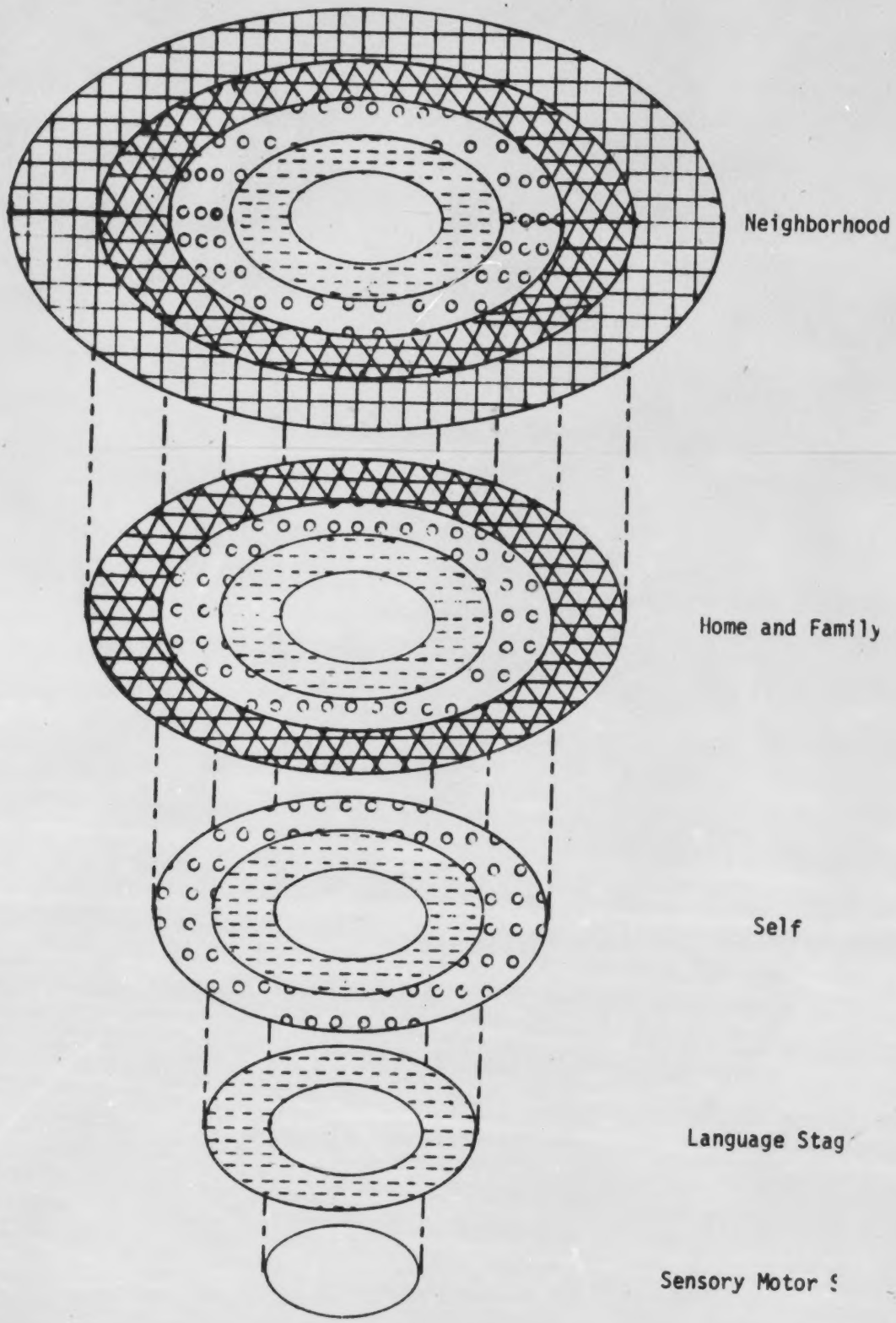
Neisen (1967) has said that curriculum development takes time, effort, interest, research, dedication, and hard work. It is a continuous ongoing process, which really has only a beginning and never an end. Currriculum development is the determination of the what, when, who, and how of teaching, modified by clear analysis of the why of these processes. Certainly, curriculum must have long-range objectives. Ragan (1961) says these emerge from a philosophy of education, a study of contemporary society, a knowledge of children and the learning process, and the thinking of specialists. If this is so, then to understand the long-range goals of the POSVAP, we should look at how the above factors relate to and become a part of it.

The POSVAP is the natural extension and expansion of the Social Learning Curriculum, which has been under development for six years. The basic model upon which the Social Learning Curriculum is built is that of the expanding environment (See Figure 1). This model says, quite simply, that a child starts out very egocentrically, aware of and interested in primarily those environmental factors that impinge directly upon him. As his mobility increases, so does his contact with various environments and with increased contact come increased awareness, interest, and the need to understand. The first environment with which he needs to become familiar is that of the Self, for it is only through understanding the Self that he can understand his relation to others, and they to him.

Beyond the Self, each environment in which he must operate has its own unique set of knowledges, skills, behaviors, mores, rules, artifacts, and people. The child's ability to function in each environment, be it

Figure 1

MODEL OF CHILD'S EXPANDING ENVIRONMENT & ENVIRONMENT COMPONENTS



Home and Family, Neighborhood,or Community, will depend upon his awareness and understanding of these disparate environmental factors and their interrelationship. This is not to say that the child learns only about one set of environmental factors at a time. In fact, he continually operates, to a greater or lesser degree, in all environments simultaneously. It is, however, necessary to focus on one environment at a time as part of the differentiating process requisite to ultimate understanding of the whole world in which the child lives. The Self and the Home and Family environments, because of their high degree of affect and their constancy and importance to the child, have been covered in some depth in the primary and intermediate levels of the Social Learning Curriculum. The secondary level curriculum, or POSVAP, will cover the Neighborhood and Community levels. However, these two levels will not be considered as discreet as the Self and Home and Family were. The Neighborhood, in particular, is a difficult environment to define. For one thing, the minute the child enters school, he is actively functioning within the Neighborhood. A true understanding of himself as a student necessitates some understanding of the Neighborhood. Also, the Home and Family function as an integral part of the Neighborhood and so must be discussed in terms of their interrelationship with the Neighborhood. In some geographic areas, the Neighborhood is either a nonexistent or unimportant environment, being indistinguishable from the community. For these reasons, the Neighborhood will not be developed as a separate environmental level of curriculum, although its uniqueness will be discussed where appropriate.

Historically, decisions related to what the content of the Social Learning Curriculum should be have derived from two basic sources. The first, naturally, is education itself. While acknowledging that there are some

basic problems within our educational system as it applies to mentally re tarded youngsters, we must also be aware that there is some good in it. The educational system has managed to teach some things relatively well. And, of course, it must continue to do so, provided those things that are being taught are, in fact, relevant to the needs of the students.

The first step, then, in deciding what to teach is taken by looking at what is currently being covered in classes for the educable child, assessing its relevance and choosing that which is best for inclusion in t Social Learning Curriculum. Indeed, over 200 curriculum guides were exami and so evaluated. Much of the content of the Social Learning Curriculum i not new, but has been considered basic learning for the EMR child for many years. In addition to looking at what is being, or has been taught, it is also advisable to look at what has not been taught (or learned) sufficient Of course, many things are not being taught for good reasons - they are to difficult, not relevant to the lives or learning levels of the retarded ch unnecessary skills in everyday life, and so on. In order to assess what generally omitted or insufficiently taught areas should be included in a comprehensive curriculum, it was decided to look at the problem behaviors exhibited by adult retardates on the assumption that, if a problem behavio manifested itself at maturity, it was because of: a) lack of exposure to modal kinds of learning or experiences related to that behavior, b) in- appropriate or antagonistic exposure to related learnings and experiences, or c) distortion or misperception by the learner of the related learnings or experiences. In any case, if the behavior is recognized as a problem th works against the satisfactory adjustment or adaptation of the adult retard needs to be looked at in terms of its educational components, and these

need to be considered for inclusion in the curriculum.

As a prelude to curriculum development, an open-ended questionnaire was sent to a representative cross-section of vocational rehabilitation, United States Employment Service, Goodwill Industries, and social welfare staffs. Respondents were asked to list very specific problems they felt the mentally retarded have in the area of a) skills, b) social and interpersonal relations, c) personal problems, d) psychological and emotional problems, and e) other areas. Over 600 "undesirable" behaviors were described. There was considerable repetition of certain behaviors both across the service agencies and across situations. For example, overdependence as a defeating behavior was in the catalog of each agency and, at the same time, seemed to be a crucial factor in occupational settings, in leisure time activities, in family matters, and in a wide array of interpersonal transactions.

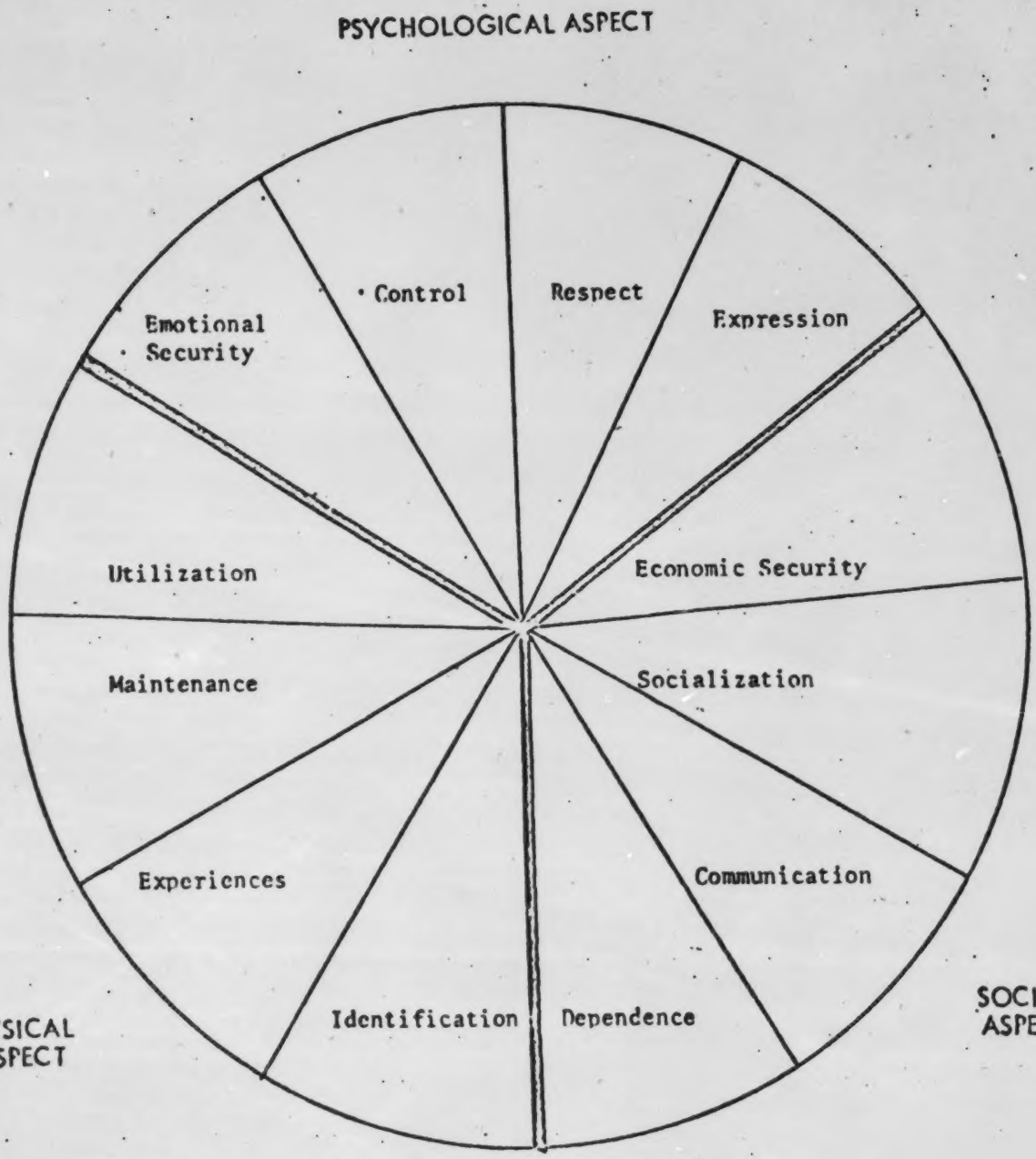
In order to determine the relative cruciality of the reported behaviors, the problem behaviors were analyzed, clustered, and broken down into component behaviors. Because behaviors tended to cluster in certain areas, it seemed evident that, at least in terms of this sample of adult retardates, there were important areas of daily living that emerged as very problematical. This analysis gave rise to the Need Areas (see Figure 2) on which the Social Learning Curriculum is built. Basically, all the problem behaviors and their components, as well as other behaviors that did not emerge as problematical, could be classified as being a reflection of need gratification in one or more of the twelve basic need areas.

Another categorization of behaviors was also made under the assumption that the behavior being observed was, in its own way, representative of the individual acting to meet a need. Negative or defeating behaviors were assumed to be inappropriate ways to meet a need or needs. These behaviors were then

turned into positive learning objectives and the developmental tasks and learnings related to the need gratification were put into the curriculum at the appropriate developmental and sequential stage. Because the twelve needs are basic, universal human needs, they prevail throughout the different environments, and can continue to provide a content base for the secondary-level curriculum.

Figure 2

Need Areas



As was expected, the majority of the problems were not in the academic skills areas, but in those related to socio-occupational adequacy. In all, 54.4 percent of the reported problems appeared to be socio-psychological in nature, and one-third of these were related to self-concept. Most of the remainder had to do with inadequate understanding of how Self and environment are interrelated, and the consequence of an action on the part of one on the other. Of the 600 plus problems, only 145 were caused by lack of specific skills or abilities, 14 percent had to do with health, grooming, and self-care. A very general listing of gross problems, by type, can be found in Figure 3.

On the assumptions that amelioration of problem behaviors can best be accomplished before they become too thoroughly engrained and that learning of proper behaviors is best begun before problems arise, the Social Learning Curriculum has, from the beginning, used the reported adult behaviors as a basis for the content of the curriculum. This is in accord with McColl (1967) and others (Kirk and Johnson, 1951), who feel that social and vocational training for the EMR should begin concurrently with enrollment in special classes, preferably at the primary level. Curricular emphasis should be placed on the development of personal grooming habits, good work attitudes, acceptable social skills, and other traits that employers seek and desire. Development of these attributes in the early school years will provide a head start in more formal vocational training programs.

In planning the POSVAP, however, dealing with the problems only at f value seems insufficient. Because there was an extremely high correlation l tween our list of 639 problems and those described by other researchers (Halpern, 1972), we decided to reanalyze our list to see if more could be

FIGURE 3

COMMUNICATION

- Oral
  - Inadequate
  - Inappropriate
  - Problematical
    - Degree
    - Type
    - Timing
- Written
  - Insufficient
    - Reading
    - Writing
  - Specific
    - Filling forms
    - Reading signs
    - Filing
    - Ads, etc.
- Gestural
  - Inappropriate
    - Extremes
    - Types

COGNITION

- Learning
- Remembering
- Sequencing
- Concentrating
- Generalizing

PROBLEM IDENTIFICATION

- Perceiving problem exists
- Understanding problem
- Accepting as a problem

RELATING TO ADULTS

- Approaching
- Accepting help

INDEPENDENCE

- Taking initiative
- Concentrating
- Over-depending
- Poor judgment in deciding when to act independently
- Inability to be independent
- Slowness

APPEARANCE

- Cleanliness
  - Body
  - Clothing
  - Parts of body
- Neatness
- Style
- Cosmetics
  - Type
  - Degree
- Posture
- Grooming

HEALTH AND HYGIENE

- Cleanliness
- Sanitation
- Diet
  - Kind
  - Amount
- Personal hygiene
- Posture
- Rest
- Exercise

SOCIALITY

- Inappropriate
  - Actions
  - Reactions
- Degree
- Type
- Insufficient
- Poor choices
  - Companions
  - Leaders

REACTIONS TO ADVERSITY

- Inappropriate
  - Type
    - Acting out
    - Withdrawing
    - Blame
      - Self
      - Others
    - Escapism
    - Denial
  - Degree
- Misunderstanding

SELF-WORTH

- Lacking
- Poor self-image
- Distorted
- Exaggerated

PEER RELATIONS

- Inappropriate
  - Fight
  - Act up
  - Hostile
  - Defy group rules
- Degree
  - Withdrawn
  - Over-socialization
- Type
  - One-sided
  - False values
    - Gifts
    - Attention

TIME SCHEDULE

- Lateness
- Slowness
- Planning and budgeting time
- Long-term goals
- Delayed gratification

NEAT ENVIRONMENT

- Untidy
- Unclean
- Misplace things
- Conservation

EFFICIENCY

- Lack skills
- Poor judgment
  - Time needed
  - Job difficulty
  - When finished
- Carelessness
- Perseverance
- Planning

ACCEPTING HANDICAP

- Doesn't understand
  - Why him
  - How serious
  - What it is
- Unrealistic
  - Do too much
  - Do too little
- Denial
- Shame

RESPONSIBILITY

- Doesn't understand
- Refuse or deny
- Misuse
- Postpone

FIG. 3 Continued

SEXUAL BEHAVIOR

- Inappropriate
  - Time
  - Place
  - Situation
- Degrees
- Misunderstanding
- Fears

FEARS

- Of people
- Of unknown
  - Things
  - Places
  - Persons
- Future
- Authority
  - Criticism
  - Police

AUTHORITY

- Respect
- Accepting
- Attitudes
- Relationships
- Suspicious of

RIGHT-TIME RIGHT-THING

- Carry-over
- Restraint
- Extremes
- Daydream

EMOTIONAL RESPONSE

- Passive
- Oversensitive
  Insensitive
- Extremes
  - Tantrums
  - Withdrawal
- Reliance on inappropriate things
  - Bad leaders
  - Medicine
  - Toys
- Frustration
  - Give up
  - Blow up
- Self-control
- Inconsistent

SOCIAL RESPONSE

- Extremes
  - Over-socialization
  - Under-socialization
- Bravado
- Balance between serious and humorous
- Easily excited
- Inconsistent
- Bizarre

QUANTITATIVE THINKING

- Money
  - Handling
  - Budgeting
  - Saving
- Time
  - Telling
  - Judging
  - Following schedule
- Measuring
  - Linear
  - Volume
- Relationships
  - Between time and money
  - Between money and needs

OBJECT JUDGMENT

- Quality
- Discrimination
  - Size
  - Color
  - Shape
  - Texture
- Standards

FIG 3 Continued

SOCIAL JUDGMENT

Vulnerability

Extremes
- Clothing
- Cosmetics
- Behavior
- Sociability
- Enough is enough

Assessment
- Emotions
- Motives
- Quality of relationships

Evaluation
- Consequences of actions
- Conformity to customs
- Stylishness

USE OF TOOLS

Coordination
- Motor
- Eye-hand

Follow instructions

Safety

MOTOR SKILLS

Lacks
- Coordination
- Finger dexterity

Awkward

Improper application

ENVIRONMENT INFORMATION

Public servants

Community helpers

Communication systems

Governmental services

Recreational resources

Transportation
- Geography
- Types
- Usage

Monetary services

Health services

CUSTOMS AND MORES

Competition

Motivation

Appearance

Roles
- Worker
- "Family Man"

Manners

Religious

Courtesy

Common sense

LEISURE TIME

Interests
- Lack
- Participation
- Hobbies

Ability

Availability

Judgment
- Value of
- Time appropriate

learned from it. Basically, this reanalysis took two forms.

The simplest analysis was an attempt to determine which problems or kinds of problems were most debilitating. Again, the problems were taken at face value, although we realize that often it is not the problem itself that becomes debilitating, but the frequency with which the problem arises. Because the problems were reported with no indication of frequency of occurrence, however, we could not take the idea of critical mass into account, except on a hypothetical basis. For example, nose-picking would probably not be a debilitating behavior if it occurred once or twice a day. Constant nose-picking, however, could emerge as a very serious problem.

Eliminating the frequency factor and looking at problems as if they occurred only once or twice a day, we defined primary problems as those which meet all of the following criteria:

1. It would be personally disturbing to almost anyone
   a. in himself,
   b. in others.
2. It would be a problem in almost every environment, class, or ethnic group.
3. It would be a problem at all times.
4. It would be disruptive to others or call attention to the person.
5. It could not easily be solved by substituting another ability or behavior.

Any problem that met these criteria, it was felt, could cause serious negati repercussions in terms of vocational or interpersonal relations to anyone ex hibiting the behavior, even infrequently.

Subjected to these criteria, only twenty-five problems emerged as primary. A problem was considered primary if 60 percent of the examiners, representing a cross section of professionals in education and psychology,

listed it as primary. Basically, the twenty-five problems fell into five categories - problems in asking for assistance, social appropriateness, forgetting, poor self-image, and poor judgment. The original respondents of the questionnaire described the retardates' twenty-five problems as follows:

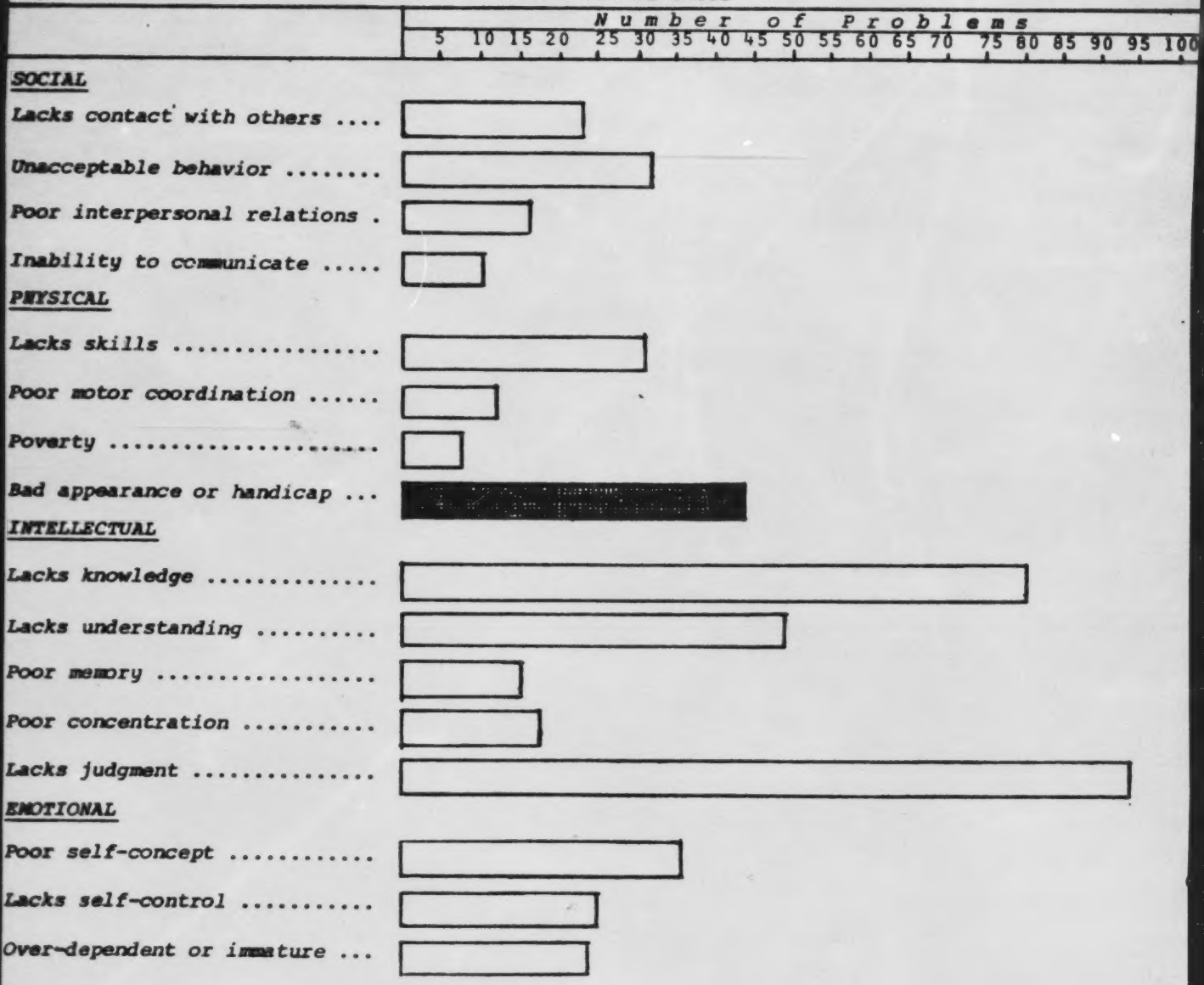
- cannot perceive when there is an existing problem
- has temper tantrums
- is not sensitive toward other people and doesn't care about others' feelings
- has poor self image and concept
- forgets where he puts things five minutes later
- does not listen; if listens, does not understand
- forgets instructions
- shows inappropriate social behavior in most situations
- is vulnerable to unscrupulous exploitation
- forgets to call (employers) if absent or tardy
- does not know how or where to obtain medical attention when needed; or does not perceive need
- cannot plan ahead or see consequences of certain actions
- does not stay out of hazardous areas
- does not understand how men are physically different than women
- does not see a reason for living
- refuses to accept responsibility for his own welfare
- does not comprehend instructions
- lacks judgment
- lacks ability to generalize or transfer from one situation to another
- lacks basic understanding of (work) world
- does not ask for help or instructions when needed
- is unable to communicate
- does not realize consequences of behaviors
- is determined to have his own way at all cost
- cannot organize step-by-step procedures in problem solving.

It is interesting to note that in earlier frequency counts of behaviors, some problems had been identified as "major" because they were listed quite often. Grooming, for example, was considered a "major" problem because it was reported in various ways sixty-seven times. It did not emerge, however, as a primary problem, perhaps indicating that we put too much emphasis on less important areas. Many problems which at first glance appeared to be primary did not meet the last criterion, as they could be

solved very simply by asking someone else for help or advice, or by substituting another behavior available to the retardate. For example, although inability to read directions at first might seem to be a primary problem, a person could ask someone else to read them for him without any serious repercussions. In fact, it was agreed that probably the one problem that would be most handicapping was the inability to ask for help. This is consistent with Edgerton's (1967) finding that retardates who functioned acceptably in the community were largely those who had some sort of "benefactor" who was able to assist them with problems when they arose. The effect of not being able to ask for assistance would be equally debilitating whether the reason was a physical inability to communicate or a psychological inability to admit help was needed.

In looking at the list of problems, we found ourselves wondering what the cause of such a problem was. For the purposes of the Self and Home and Family levels of the Social Learning Curriculum, we looked at the problems only in terms of an overt behavior and the various other behaviors making up the problem, or the solution to it. We had divided the problems into four categories: social, physical, emotional, and intellectual, according to the behavior exhibited. For example, a response like "blabs about personal matters to strangers" or "displays poor judgment in choice of friends" reflects in social behavior. However, if we look at the probable cause of the problems, they are basically problems of poor judgment, which is an intellectual problem. Viewed this way, many problems boiled down to one of three things: lack of the basic facts and knowledge necessary to solve the problem, lack of understanding of what the problem was (what was involved in its solution), or poor judgment. Figure 4 shows the breakdown of problems by probable cause, where one was discernible. In some cases the cause could not be

Figure 4
ANALYSIS OF PROBLEMS OF POST SCHOOL RETARDATES
BY PROBABLE CAUSE



determined, was seen to be either uncontrollable (part of a definition of retardation) or external to the retardate (not really his problem, but someone else's).

Traditionally, the school has considered the intellectual development of children as its major responsibility. The imparting of knowledge and understanding and fostering the ability to make good decisions are what the schools feel they are doing best. Yet, in looking at the problems reported, it is exactly these areas in which they seem to be failing children the most. Many of the problems listed under other areas would probably, had they been stated more completely, have also fallen within one of the three areas of knowledge, understanding, and judgment. For example, the statement "acts naughty all the time" gives no clues as to why, and was therefore put under the category "unacceptable behavior." Similarly, "cannot use hand tools" could be due to a variety of reasons, but can only be listed under "lacks skills" because of insufficient information.

It is interesting to note that, without even getting into whether the school are doing what they ought to do, there is much evidence that they are not doing what they say they do. With regard to the larger question, two recent studies have given former students of special classes for the EMR opportunities to comment on their school experiences. Dinger (1961) reports suggestions made by former students he interviewed for improvement of curricula in the areas of "cooking, sewing, shopping and child care were concrete and extremely practical, largely reflected life-needs unmet by their school experiences. Additional suggestions, based on life experiences, were made in the areas of credit buying, saving, loans, insurance, and budgeting." Gozali (1972) found responses pertaining to the experiences of his study population in special classes tended to be negative. The majority (85 percent) perceived their education as degrading and useless. Many felt they had learned

too little and had not been allowed to participate in things that might be meaningful, like work in the auto-body shop. Ninety-one percent of the subjects said they would not want their children to be in a special class. Interestingly, the interviewees in this study had all been participants in a work-study program while in school.

It is reasonable to suggest that students who feel so negatively about their school experiences may also have some negative feelings about themselves, especially in terms of perceived ability. Indeed, it has been demonstrated that the self-concept of the retarded correlated positively with achievement (Snyder, Jefferson, and Strauss, 1965). The question of which comes first, achievement or self-confidence, is not yet answered, suggesting that the school ought to concern itself with raising both.

One of the obvious problems with much special education today is that there is a lack of continuity in planning between levels, particularly between the elementary school and the junior-senior high schools. In primary and intermediate programs students are often given the "watered down" version of traditional curriculum - less meat in more time. Little or no effort is made to adapt the educational program to the specific needs of the retarded child except in the time dimension. While there are many arguments for this approach (the child may go back to regular class; he must be given the opportunity to succeed or fail in regular subjects, and so on), one which definitely does not hold water is that the child needs to be doing what his peers are doing. What he - and his normal peers - need is to be prepared to take their place in society, according to their abilities. If this requires, in the case of the retarded, more emphasis on social and vocational training at an earlier

age, so be it. The payoff of any educational system should be success - jobs, adjustment, coping, adaptation and, yes, happiness.

Fortunately, building as we do on the Social Learning Curriculum, we are not in the position of having to play "catch up" at the secondary level. We are, however, in the position of having to determine what kind of educational program best serves the academic, social, psychological,and occupational needs of retardates. We must experiment with not only content of the curriculum, but the methods used to teach that content and the environments that lend themselves to optimum teaching. We must make sure that the retarded individuals we educate will be able to change with the times. This ability is more than a skill in which one can be trained, it is the basic and most important element in any kind of coping behavior. It requires an understanding of how to assess and reassess elements in a situation and make decisions and judgments accordingly. Retardates must be taught how to do this if they are to succeed fully in their adjustment to society.

What this seems to indicate is that some sort of multidimensional approach to secondary education is needed. Singular attempts at the education of adolescent retardates by giving them academic skills, job skills, or specific vocational training have proven insufficient. What is called for is a complete instructional system including not only curricular content, but methodology, delivery procedures, and environmental utilization as well.

CHAPTER III

Curriculum Content

As early as 1931, the White House Conference stated:

> "Serious consideration must be given to the curriculum best suited to the needs of mentally retarded children. The aim is to develop the child's mental capacities and the control of his emotions to the point of adequate social adjustment and the curriculum must necessarily be determined in part by adult requisites."

Since that time many programs have evolved designed to give a well-rounded education to mentally handicapped children. A great deal of experimentation has taken place, and, as far as curriculum is concerned, a great deal more needs to be done.

Along with the development of experimental programs, a number of researchers have tried to identify the "adult requisites," which are supposed to aid in determining what form curriculum should take. Although the resultant follow-up studies, comparative studies, and speculative comments have not produced any hard facts upon which curriculum can be based, certain general ideas have emerged which, correctly or incorrectly, have been used to establish program direction. Basically, these ideas are:

1. The retarded can be placed successfully in the work world. Many retarded individuals are capable of self support, and do adjust satisfactorily to society. Undoubtedly, their numbers could be increased if all EMRs were provided with adequate services and education directed toward developing their social-occupational potential.

2. School programs for the retarded, as presently constituted, do not provide the most effective vehicle for their academic, social, and vocational preparation and, by inference, are not adequately preparing them for many aspects of adjustment in society.

3. The retarded traditionally have ended up in low-level jobs. Their vocational horizons can be lifted if they receive proper training that develops their ability to meet change and move confidently from one situation to another.

4. The social level of the retarded is the most frequent deterrent to vocational success. They must be helped to achieve social maturity before they enter the work world.

5. The education of the retarded is a continuous process, which cannot be isolated from the work world. Accordingly, the curriculum must take into account knowledges and behaviors that are related to the society outside of the school, particularly those which are vital to adjustment in a vocational setting.

While these conclusions provide some basis for program planning, they are not specific enough to delineate specific content. Indeed, most special education programs in recent years have reflected some or all of the concepts enumerated. Syden (1962) concluded from a review of school curriculum for the mentally retarded that the content employed, whatever its title or organization, is socio-occupationally oriented and designed to provide a bridge between school and work. If this is true, then we now need to examine the specific dimensions and implementation of socio-occupational orientation.

Our analyses of over 600 "problems at maturity" reported by professionals working with adult retardates (see previous chapter) is an attempt to determine what the elements of adequate functioning in society are. By looking at each problem in terms of its probable cause, the social, physical, and psychological components and ramifications of it and the discreet knowledges and behaviors that go into its antecedent or acceptable behavior, we can begin to develop a catalogue of every fact, skill, knowledge, judgment, and behavior adults need. The items in this catalogue can then be prioritized, clustered, and sequenced both logically and developmentally. During this process, several things happen:

1. Some items "drop out" as being either part of something else, or already part of the child's repertoire.

2. Many items depend on a common fundamental fact, knowledge, or skill which, when mastered, will eliminate the need for other items.

3. Many items arrange themselves into a sequence of what needs to precede or follow what, in order for the goal to be reached sensibly. Along with this, certain "gaps" appear, where there is no provision for a transition from one concept to another. These "gaps" must then be filled.

4. Certain "themes" emerge around which a piece of curriculum can be built. For example, "conservation" is a theme that cuts across use of things, time, resources, and energies. Understanding of that theme will probably eliminate the need to teach specifics of putting things away, wrapping food, not dawdling, and so on. Many items in the catalogue can thus be incorporated into a broad conceptual theme.

5. Items become identifiable as either "tool" items or "problem" items. In other words, many items will reflect problems that need to be solved. These may become the objectives of the curriculum, for it is the solution of these problems that will contribute to immediate learning and future adjustment. However, the ability to solve the problems depends on a number of other things - sometimes motor activities, sometimes cognitive abilities, sometimes awareness of basic facts, and so on. These can be called "tools" to problem solving, and reappear as necessities for the solution of many problems.

Using a procedure like the one outlined, we can begin to structure the curriculum realistically. Structure refers to the parts of the curriculum and the ways in which they are interrelated. Curriculum structure is the various subjects and educational activities in their vertical and horizontal arrangement. In all considerations of structure, assumptions must be made about the identifying parts. Each molecule (subject area) can be analyzed and has its own structure. However, curriculum is more than putting together several molecular analyses. More than an inventory of the best of various disciplines, curriculum must be a balanced plan taking into consideration: 1) what is needed today - kinds of demands made upon youth, equipment they will have to use, future opportunities, and so on; 2) the situation of students in terms of the environments they function in, their previous knowledge, experience, attitudes, conditions, and so on; 3) learning styles and teaching techniques; and 4) the students, school, and community and the worth of any piece of content for any particular student. (Ford and Pugno, 1965)

Figure 5

OBJECTIVE: TO BE ABLE TO PURCHASE A WEEK'S GROCERIES FOR A FAMILY OF FOUR.

PROBLEM ITEMS

plan week's menu for four people	make shopping list for a week	budget a week's income with an appropriate amount for food	other	
know when assistance is required and ask for it	choose most appropriate person to ask for help	complete shopping without attracting adverse attention to self	other	
use public transportation	make a purchase in a store	compare prices and choose cheapest	compare amounts and match with price	locate various foods in supermarket	other

TOOL ITEMS

Emotional Ability	self-confidence	awareness of own feelings	awareness of others' feelings	positive self image	self-control	stability	other		
Social Skills	manners	conversing	playing	leading	following	smiling	other		
Integrative Skills	sorting	driving	tabulating	drawing	using tools	telling time	other		
Cognitive Skills	see difference between things	judge which of 2 things is best	know basic shopping procedures	recognize various items when seen	follow location directions	judge when he cannot do something	other		
Academic Skills	reading	writing	adding	subtracting	multiplying	spelling	counting	dividing	other
Communication Skills	speaking	listening	gesturing	asking	telling	responding	signing	interpreting	other
Motor Skills	walking	hopping	pushing	picking up	running	piling	jumping	bending	grasping	other
Pre-Requisites (Abilities)	move about	communicate	see	receive communication	pay attention	be with others	other		

Considered this way, the variables catalogued and analyzed can be structured relatively easily. Figure 5 shows the basic design of curriculum structure for the POSVAP, without the inclusion of specific content items or areas. As you can see, the basic approach is one of identification of a problem, breaking the problem down into its learning components, and building both the tool and problem components into a developmental hierarchy for purposes of instruction. More about the approach to the objectives inherent in the problems will be explained in the next chapter on methodology.

It is interesting to note that other researchers have also attempted to identify problems of adult retardates recently, and there is a very high degree of correlation between our list and theirs. This makes the use of these problem areas as bases for setting instructional objectives rather secure. Halpern (1970) reviewed ninety-nine studies of adult success and identified and recorded the various outcome components considered in these studies in the exact terms employed by the investigators. This resulted in a catalogue in excess of 600 entries that appeared suitable for categorization following a classification scheme suggested by Stephens and Peck (1968) in which variables are arranged into three broad fields: personal, socio-civic, and vocational. The 600+ variables Halpern identified corresponded very closely to the 600+ identified by our sample, lending a certain amount of validity to them.

A list of variables of such magnitude, while providing some inform obviously does not discriminate between variables in terms of importance. Our identification of "Primary Problems" discussed in the previous chapter was one attempt to do this. Another is that of W.B.D. Stephens (1964) who

compiled a catalogue of some 141 criterion variables of successful adult adjustment based on the judgments of ten experts in the field of habilitation of the retarded. These were grouped in an a priori fashion under the general categories of personal, socio-civic, and vocational success. Assessment instruments were then devised that were applicable to the student, his parents, and his employers. With a carefully designed sample of 125 adult retarded male subjects, results obtained on these questionnaires were subjected to a factor analysis to determine the "factors-in-persons" contributing to overall estimates of adult success or failure. In this way, Stephens identified seventeen primary factors as criteria of success. Again, some of these factors are not unlike our twenty-five primary problems, although they tended to be both more general and more work-oriented. Interestingly, Stephens's factors did not fall neatly into her three preconceived categories, and the underlying variables may combine in a variety of ways to form quite different patterns of adaptation.

Yet another attempt to describe factors related to success is that of Murphy (1973). In trying to identify concepts common to secondary-level curriculum across vocational areas, she had 100 experts react to a list of concepts gleaned from a search of vocational education literature. From an original list of more than 1400 items, a final list consisting of 91 concepts was compiled. The experts rated these items as "essential," "useful," or "not important" to their vocational field at the secondary level. Items were then rank-ordered. An examination of the items that emerged as "essential" indicated that they represented characteristics of the worker, and dealt primarily with attitudes toward the world of work. Attitudes and self-understanding rather than job skills per se seemed to be

what was considered essential at the secondary level. The lowest ranked items were those relating to the American economic system, kinds of businesses, and how businesses are run. Teachers, teacher educators, and workers agreed on the importance of 93.4 percent of the items, indicating that teaching for commonalities should be encouraged. In looking at the eighteen items ranked above the eightieth percentile by Murphy's "experts," we again find a considerable similarity with our twenty-five "primary problems," although her study was focused on the vocational needs of normal secondary students. The list of factors, in rank-order, can be found in Appendix A.

Henry Leland (1964, 1970) emphasizes specificity in the study of outcomes of educational programs: "If the most critical demands - these specific demands on which the community places the greatest importance - can be defined, it is possible to help the individual to meet these demands. Here, the relationship between the choice and course of treatment becomes apparent, modifiable, and ultimately predictable." With the various compilations of success criteria from several sources before us, it should, therefore, be a relatively simple matter to formulate instructional objectives that will enable retarded individuals to meet the demands of society, assuming that success reflects the adequate meeting of social demands.

Of course, over the years others in the field of special education have, for various reasons, come up with their own ideas about what should be included in a curriculum for the retarded. Many of these ideas appear to be very valid and should be taken into consideration. In general, none of them provide the specificity Leland feels is demanded. As overall guides, however, they have some utility. For example, Kolstoe feels that his work

implies that a good curriculum for the retarded would call for training in the development of personal independence and responsibility. Acceptable grooming and habits of cleanliness cannot be overemphasized, especially getting each person to accept responsibility for his own appearance. Kolstoe feels schools should make a concerted effort to teach each mentally retarded child the value of cooperative and coordinated experiences in socializing activities. Use of hand tools, sorting for speed and accuracy, and persistence should also be built into the program.

Kirk and Johnson (1951) have discussed curriculum as follows:

> "Objectives can be stated in a number of ways and in different terms. In general, however, all specialists agree that the more specific aims for the mentally handicapped include the following:

1) They should be educated to get along with their fellowmen; i.e., they should develop social competency through numerous social experiences.

2) They should learn to participate in work for the purpose of earning their own living; i.e., they should develop occupational competence through efficient vocational guidance and training as a part of their school experience.

3) They should develop emotional security and independence in the school and in the home through a good mental hygiene program.

4) They should develop habits of health and sanitation through a good program of health education.

5) They should learn the minimum essentials of the tool subjects, even though their academic limits are third to fifth grade.

6) They should learn to occupy themselves in wholesome leisure-time activities through an educational program that teaches them to enjoy recreational and leisure time activities.

7) They should learn to become useful members of a family and a home through an educational program that emphasizes home membership as a function of the curriculum.

8) They should learn to become adequate members of a community through a school program that emphasizes community participation.

> The program for the mentally handicapped stresses- 1) occupational adequacy, 2) social competence, and 3) personal adequacy."

Dinger (1961) discussed the curricular implications of his follow-up study in Altoona, Pa.: "Only as we comprehend the diversity of requirements made on the retarded as adult workers, citizens and homemakers, can the necessary skills knowledges and attitudes be identified and arranged into a valid curriculum for them. Adults who had previously been students in classes for the retarded have successfully played the above roles in spite of their limited academic acumen. The specific qualities which were responsible for these successes must be isolated and developed in students through curricular experiences. Research results indicate that personal-social development, rather than academic skill development, will occupy proportionately greater emphasis in the valid curriculum's content."

Although all of the conclusions drawn by various researchers appear to be valid ones, each is in its own way incomplete. Many people have looked at the work adjustment of the retarded, others at the school adjustment, and a very few at the social adjustment. No one has looked at everything all at once and tried to put the various parts of life into their proper perspective. The work-oriented researchers have looked only at the factors leading to employability. Without suggesting that this is not very important, one has to ask: "Is that all?" Chaffin (1969, 1972), in studying the work behavior of educable retarded clients, came to the conclusion that the most important factors related to employability and job success were appearance and quality and quantity of work. Production rate seemed to be very important. If these conclusions were acted upon in isolation, the program that would probably emerge would be one of grooming and timed practice sessions in

various industrial skills such as sorting, assembling, and so on. While such a curriculum might prepare students well for some kind of jobs, it is questionable whether it would contribute anything to their overall personal or social development.

On the other hand, professionals who have looked within the school for guidance in what is needed have come up with a quite different set of criteria for success. While these are apt to contribute to the child's success in school, one has to ask what relevance they have to the world outside the school, which makes very different demands upon an individual. Not only is the school an "unreal" environment in many ways, it is one that has its own restraints which sometimes work against the optimum education of the child.

When all is said and done, the feeling one gets is that almost any choice of priorities for curriculum for the retarded will benefit some children who are going into some situations. Probably very little that happens in schools is actually damaging, but it is equally possible that very little is actually beneficial. Often teachers and curriculum writers feel they must make a choice between one subject and another. There is a very realistic feeling, because of the retardate having a slower learning rate and a shorter exposure to education than his normal peers, that not everything that is needed can be taught. While this is true, it puts a great responsibility on educators to choose that which is most important. Too often, this choice is made between an array of rather specific skills. Not only does this often limit the child's exposure to experiences that might be beneficial to him, but it also tends to put him into a category from which he cannot escape. For example, if someone decides a given child should be

taught to be a better digger than a better scooper, and programs him accordingly, he may turn out to be an excellent digger, but completely inept at scooping. Thus, he has been relegated to the role of digger for the rest of his life, and we can only hope digging does not go out of style.

It has been our feeling throughout the development of the primary and intermediate levels of the Social Learning Curriculum and continues to be at the secondary-level POSVAP, that there ought to be a better way. All of our analysis of adult behaviors, review of research studies,and experienc in field-testing the Social Learning Curriculum has confirmed our original feeling that curriculum for the retarded must be approached with an eye out for commonalities, rather than differences. In other words, whatever skills knowledges, and behaviors necessary for adults to function well vocationally personally, and socially have certain things in common. When these are identified, the instruction must capitalize on these, and the curriculum must use them as its basis. Thus, a child does not have to choose between digging and scooping for, when analyzed, we see that both have much in common and if the commonalities are recognized and understood, it is a simpl matter to transfer from one to the other. Both require similar muscle movements, use of tools, speed, coordination, responsibility, working with others, and so on. These are the factors that should become the basis for talking about each, as well as a number of other skills like sweeping, raki and so on.

Although this is a very simple example, it serves to illustrate tl point. Another look at Figure 5 will clarify it even more. The items enclosed by the heavy black line are those (of the ones appearing on this cha important to the ability to meet the objective stated at the top. Another

objective, like, "The student should be able to join and participate in an organized social group" will require many of the same skills, or a vocational objective such as "The student will be able to get himself to work on time," will again utilize many of the same tool and problem areas. If we were to outline the skills for the second objective in blue, and the third in red, we would find that some boxes had all three colors. These, then, emerge as basic important common areas, which should be emphasized and related to the various objectives.

Since the above examples of objectives represent one each from the vocational, personal, and social realms, it seems reasonable to assume that, by concentrating on skills, behaviors, and knowledges that the objectives from all three aspects of life have in common, we can prepare the retarded for adequacy in all areas. This should contribute to more well-rounded individuals who can more easily transfer from one skill to another because they have mastered the fundamentals for all.

In summary, the content of the POSVAP will evolve from the catalogue of desirable adult behaviors gathered and confirmed from several sources including our own survey. The items in this catalogue will be screened and those emerging as most important will provide the basis for determining the aspects of commonalities. Each behavior will become an objective. These objectives will include many from the realms of personal adjustment, vocational adequacy, and social living. Each objective will be further analyzed and its "tool" and "problem" components identified. These will be listed and cross-checked with those emerging from the analysis of other objectives. Common items will be identified and emphasized. Items will be identified as

being best taught in isolation, or in conjunction with other similar items. Paired associate learning models will be suggested as one means of teaching for commonalities. All skills, knowledges, and behaviors will be put into a problem-solving context, so the students will immediately see their relevance to what needs to be accomplished, as well as to other similar objectives.

Apparently, there are many problems that could be alleviated by fairly basic techniques of transmitting knowledge, helping children to understand, and, most importantly, teaching them how to judge situations and make decisions. All of these, of course, are major goals of the Social Learning Curriculum and POSVAP. The matter of being able to make reasonable judgments about social, vocational, and personal situations is the most difficult to accomplish. Judgment is not something that can be transmitted miraculously from teacher to student, but is an integration of a number of factors which can be taught as well as an approach to looking at problems and trying to work out solutions. Because this is as important as knowing basic facts and vital to being able to act upon what is known, we must include it as an integral part of the curriculum, if the curriculum is to accomplish what we want. We call this approach the inductive method and, since it is so vital, we need to look at what it involves more carefully.

CHAPTER IV

METHODOLOGY

Several investigators who discovered during the "efficacy" study craze that retarded students did not learn as much in special classes as their equals in regular classes have suggested that one reason for this might be that special class teachers had lower levels of expectation. Many studies seem to indicate that teachers let their preconceptions of children's ability influence the way in which they teach them, the amount of material they present, and the point at which they think the child has learned "all he can." Two studies illustrate this phenomenon. Rosenthal and Jacobsen (1968) gave all the children in one elementary school a test they told teachers was a measure of children's readiness to show an intellectual growth spurt. The experimenters then drew at random 20 percent of the names and presented them to teachers as the potential "bloomers." Later in the school year they gave the test, which was actually a group intelligence test, again. The authors reported that the predicted "bloomers" gained significantly more intelligence than the others. Prophecy fulfilled.

Beez (1968) had a group of graduate students try to teach a five-year-old headstart child as many words as possible in ten minutes. Although there was no basic difference in the intelligence of the children, the tutors were shown contrived psychological reports showing that half of the children had low potential for school learning and the other half had high potential. What the teacher believed influenced the number of words

learned by the students. Observations showed that fewer words were presented and learned when the teacher's expectancy of ability was low, because the teachers spent more time explaining and repeating words.

Because this phenomenon of self-fulfilling prophecies exists, many retarded students are, in effect, cheated out of the opportunity to learn as much as they can. Seemingly, some of them are able to pick up enough additional knowledge outside of the school by one means or another, because they leave school with more knowledge than was ever presented to them while in school. The real question, though, is: how can instructional procedures be changed so that each child is able to reach his full real potential?

According to Gestalt psychologists, learning follows three stages: mass, differentiation, and integration. The mass stage occurs when the learner is first confronted with the problem to be solved. It is, at this point, a total situation or conglomeration of things, facts, ideas, and people, some of which have relevance to the solution of the problem and some of which do not. If the problem is one that is new to the student, or which he does not know how to solve, it is somewhat of a mystery - an undifferentiated mass.

In order to be able eventually to solve the problem, the learner sorts out the elements of this mass, examines all the aspects of it, and separates the relevant from the irrelevant pieces. This is done by looking at each piece both individually and in association with other pieces. All of these activities are part of the differentiating stage; that is, the

problem, or mass, is broken apart or differentiated so that its elements can be understood, used in problem solution, and related to other parts as appropriate. Practice in differentiating the elements of the problem and in affecting their relationships ultimately leads to the ability to solve the problem. The information and experiences distinguished in the differentiating stage become part of the student's knowledge bank so that the next time he is confronted with the problem, he will be able to solve it almost automatically. That is, he will call up the knowledge and experience, say to himself, "Ah, yes, this happened once before, and at that time, I solved it this way. If I do that again, it will probably work again." At this point, the learner has reached the integrating stage. He can now put all the differentiated information together, relate it to a problem or experience, and use it to solve the problem whenever the problem arises.

In sequencing and presenting the content of the POSVAP, we will first present the problem (mass) so that the students can become aware of it. There are two major reasons for this. The first one is that all the differentiating process and learning that is important to the solution of the problem should have some meaning to the learner. That is to say, he should realize that there is a specific purpose for doing each of the things leading up to the attainment of the objective. For example, in the objective in Figure 5 regarding shopping for a week's groceries for a family of four, we identified a number of "tool" skills that were necessary to the solution of that problem. Any one of these "tools" could be taught in isolation. For instance, addition of numbers can be taught ad infinitum and, although some students will learn to add, others will not, and none of

them will understand why they are doing it. In order to see the purpose of any piece of learning, it must relate to something that is real to the child. The problem, or mass, puts each learning into perspective and gives it utility. If seen as a necessary step in being able to do something that the child recognizes as necessary, or meaningful, each learning becomes important and will probably be learned faster.

The second major reason for confronting the students with the mass initially relates to the differential treatment teachers provide for students based on their perception of students' abilities. If a teacher assumes that a student cannot solve a given problem, she will tend to start with the most elementary aspects of the problem and may spend considerable time reteaching things that students have already learned. By presenting the problem to the students initially and providing them with an opportunity to try to solve it if they can, the teacher can either confirm her feeling that they are not yet able to solve it, or perhaps discover that they can, and do not need the instruction she was about to give. What is more likely, however, is that, given the chance to try to solve the problem, students will be able to perform some of the skills needed in the solution and get stuck on others. By carefully looking at both the process the student is using in approaching the problem and the specifics of what he is able to do, the teacher can assess the student's knowledge and decide what she needs to teach, where to begin, and what needs the most emphasis. This can save valuable classroom time, because it means the teacher is not spending time repeating things already known, or doing things that are so far beyond the students that they are completely meaningless and therefore a waste of time.

Another look at Figure 5 will show that, in actual fact, a mass objective, such as shopping for a week's food for four people is made up of not only facts, knowledges, skills, concepts, and people that must be differentiated, but also many subproblems, or "mini" masses. Any of these may be the mass that a child is confronted with at one time in the developmental process. For example, "counting money" may be an early mass. Confronted with an array of coins and bills that the child does not know about, he sees a mass of money. The problem of counting it can only be accomplished when each denomination is differentiated. This mass becomes one part of a larger mass such as "making a purchase" which, in turn, becomes one part of a still larger mass, or problem, such as "buying $10 worth of groceries," and so on. So it is not that the teacher confronts the child with such a large unsolvable mass that he must become frustrated and fail, but she chooses a mass that contributes to the larger one, presents it as a problem, ascertains if he can solve it, and then decides to either backtrack or go on to a more difficult mass depending on what he does. The point is, he is given a chance.

It is important here to clarify a point. The mass is presented to the student in the form of a problem to be solved. This is quite different than giving the student a rule, or generalization, and then differentiating it by deducing its elements from the overall rule. This is essentially deductive teaching, or reasoning, in which the teacher says something like, "All animals, including humans, require food to stay alive. Let's see how many animals we can think of that need food." All further analysis, or differentiation, evolves from the rule and will be correct as long as it follows the rule. The basic problem with this approach,

especially with retarded children, is that one cannot always assume that they understand the rule, even though they can state it, or that they will remember it. For this reason, we have developed the Social Learning Curriculum and POSVAP to use an inductive or problem-solving approach, in which instances of problems are presented first before principles or rules are mentioned.

John Dewey has said that all experiences have educational potential; in fact, all experience educates, although not all experiences educate equally well. Some situations call forth more concern, elicit more activity, and stimulate more interest. Such situations tend to be problematic in character. That is, they provide some challenge because there is something in them calling for solution. We have seen that adult retardates have many problems. They frequently find themselves in situations in which they realize their present level of ability is inadequate, or that something is operating with which they cannot quite cope. Dewey would say that this was the beginning of an ideal learning situation, where the nature of the situation is recognized by the learner as problematic <u>to himself</u>. Unfortunately, while often realizing that they have a problem, many retardates are also aware, or think they are, that they cannot solve the problem by themselves.

In any case, recognition of the existence of a problem is not sufficient. In order to solve his problem, the learner needs input in the form of factual information, knowledge of his own ability to solve problems, background history, current knowledge about the situation leading to the problem, and so on. He needs to learn how to communicate and how to analyze the situation so that he can make reasonable decisions about it

as it affects him. While "normal" people are often able to learn to do this on their own, the retardate needs assistance in the step-by-step procedures involved in assessing problem situations and solving them. Too often, we have attempted to "educate" the retardate by telling him what the end product of desirable behavior should be. Since he does not know why this "ideal" or rule came to be, he cannot generalize the principle or behavior to other situations, because without understanding the elements of the principle, he will not see their relation to other situations. Without the opportunity and ability to engage in critical thinking himself, his education and subsequent adjustment to society will not be complete.

The basic approach of the Social Learning Curriculum and POSVAP, after having identified the needs that must be fulfilled, is to determine at what point the child is in his ability to fulfill his own needs, and what problems he is having in doing so. By starting where he is in his development, determining what his problems are, and applying the inductive problem-solving approach to solving these problems, the POSVAP will fuse content and methodology to either so that one is inseparable from the other. The problem-solving approach, then, becomes a vital part of the total learning process.

While the specifics of problem solving vary with the situation, the process basically includes the following stages:

1) a difficulty is felt,
2) the problem is clarified and defined,
3) a search for clues is made,
4) various suggestions are made based on the available data,
5) suggestions are evaluated,
6) a possible solution is accepted,
7) the solution is tried out (verified), and
8) if found to be workable, applied to similar problems,
   or
   if found not workable, rejected in favor of another solution which will evolve out of a repetition of necessary stages of the process.

Thus, the problem-solving method of teaching incorporated into the POSVAP is not unlike the scientific inquiry method used by most of us in solving problems related to our fields of endeavor. (See Figure 6). Through extensive use of an inductive method, including detailed questioning sequences for the teacher's use, the curriculum will not only present the solution to the "problem" for which it is designed, but give the teacher the tools to enable students to sort out relevant information and reach their own conclusions. This approach is based on two basic assumptions:

1) Retarded children can learn to solve their own problems and make generalizations that will allow for solution of related problems, if properly taught, and
2) A teacher can teach them properly if given the tools and strategies to do so along with the goals to be met.

Basically, the problem-solving method begins with an introduction to the problem, or confrontation with it. This confrontation can be real - that is, the student actually has the problem, or it can be simulated. In either case, the student is given the opportunity to try to solve the problem. If he can, fine; if not, step-by-step procedures will be followed to enable him to do so. These steps allow him to differentiate the problem situation by finding out what is in it - the physical, social, and psychological components of the problem - and learn about these components. When he is familiar with them, he can use them to make inferences about how they fit into the total situation, how they will affect him or what happens, or what they mean to the ultimate solution of the problem. If these inferences seem reasonable, the learner can begin to make some predictions about the problem in terms of his possible actions toward solving it. That is to say, he can apply, theoretically or actually, the law of consequences, and see

Figure 6

Models of Problem-Solving Techniques

Inductive Teaching Method - SLC		Scientific Inquiry Method	
MASS STAGE - Introduction to problem - Confrontation with whole		Problem Identification Statement of Hypothesis	
Problem Solving - Differentiation Labels Details		Testing Data Gathering Research	
INFERENCE PREDICTION		Data Processing Analysis Synthesizing	
Verify Prediction		Verification of Hypothesis	
GENERALIZATION occurs	Recycle - review labels & details new inf. & pred.	Hypothesis Verified	New hypothesis arises

what happens while under the guidance and protection of a teacher. If what he thought would happen does, and it was what should happen, he has learned something positive and is ready to apply this new learning to other similar situations to test for generalization.

The inductive method can be used in a variety of settings, activities, and interactions. The important thing is that the setting, activity, or interaction be so structured that it allows for a logical approach to the solution of the problem. For example, a setting including a form board is inductive in that it enables the child to go through the stages of problem solving to figure out how to complete the form board. More complex settings might provide the equipment necessary to solve a more complex mechanical problem. At times it is preferable for the teacher to augment the setting by intervening; that is, to guide the children in finding the solution, ask probing questions to guide their exploration and, if necessary, lead them to the next step in the problem-solving process.

If inductive learning is taking place, probing will follow a progressive sequence of events, whatever the setting or activity. The strategy to manage this progression is what we call the inductive problem-solving sequence. The purpose of using such a sequence is to train children in a style or strategy of learning. Whether the "steps" in the sequence take the form of questions posed by the teacher or acts performed by the learner, they provide a method for eliciting responses based on the increasing difficulty of the investigation.

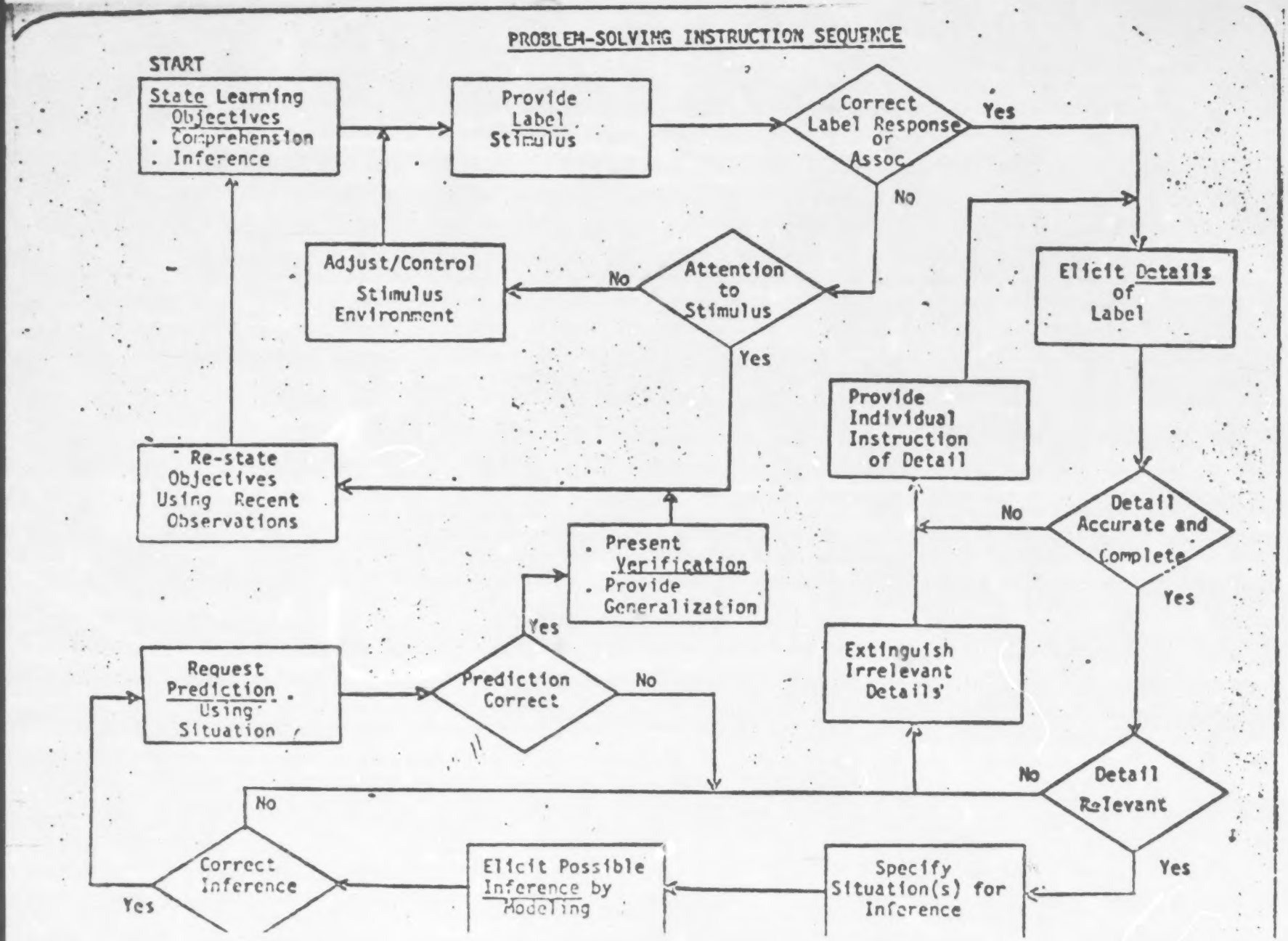

PROBLEM-SOLVING INSTRUCTION SEQUENCE
START
State Learning Objectives
. Comprehension
. Inference
Provide Label Stimulus
Correct Label Response or Assoc
Yes
No
Adjust/Control Stimulus Environment
No
Attention to Stimulus
Yes
Elicit Details of Label
Provide Individual Instruction of Detail
Re-state Objectives Using Recent Observations
. Present Verification
. Provide Generalization
No
Detail Accurate and Complete
Yes
Yes
Request Prediction Using Situation
Prediction Correct
No
Extinguish Irrelevant Details
No
Detail Relevant
No
Yes
Correct Inference
Yes
Elicit Possible Inference by Modeling
Specify Situation(s) for Inference

Figure 7

The flow of the inductive problem-solving sequence is illustrated in Figure 7. As you can see, there are five hierarchical steps in the inductive problem-solving sequence:

labeling
detailing
inferring
predicting
generalizing

Inductive teaching requires that the teacher set the scene by identifying the immediate learning objective. In the Social Learning Curriculum, these objectives are stated in a developmental sequence. How the teacher decides on which objective is indicated is discussed in greater detail later.

Having stated the objective, the teacher then leads the children through a five-stage problem-solving procedure. In this process, the teacher's leadership takes the form of confronting the students with questions which, in the answering, allow the student to acquire information and, equally important, a feeling of competence in handling the question.

Stage 1 is the labelling stage. Here the teacher asks the childr to identify the elements of the problem by naming observable things or people or both. It is often at this stage that the teacher has to engage in some rote teaching in order to provide the child with a missing label.

Stage 2 is the detailing stage. This is a crucial stage because the teacher not only draws the children's attention to a powerful differer iating tool - the descriptive adjective - but also subtly underscores the elements important to the solution. This is done by asking the child to describe them,while omitting any mention of irrelevant elements.

Stages 1 and 2 are, of course, data collecting stages for the children whereby they sort out and identify the elements of the problem basic to its solution.

Stage 3 is the inferring stage. This is the first data processing stage. Based on his observations in Stages 1 and 2, the child is asked to make an inference as to the possible outcomes or solutions to the problem. Not infrequently, two or three children in the same group will make contrasting and even contradicting inferences based on the same information. This is fine because it reveals to the teacher how children use information as a basis for reasoning. When, through further questioning, the teacher feels that the children feel pretty secure about their inferences, he is ready to move to the next page.

Stage 4 is the predicting and verifying stage. Here the teacher asks the child to solidify his convictions about his inference by asking him to predict the outcome or solution to the problem. You may get as many predictions as inferences.

Having gotten the children to predict outcomes, they need to be confronted with the verification of the prediction. In the verification, the child or children making the correct prediction gain positive reinforcement. Those who were wrong can now be led through the labelling and detailing stage again so they can see where they missed or confused important data.

Stage 5 is the crucial stage because it is here that the rule or principle is formed and generalizations enhanced. This is the generalizing stage. It is important to recognize that almost all problem solving leads

to the formation of rules and principles. Sometimes it takes the solution of two or more related problems to evolve a meaningful rule. In some cases, the solution of the problem is more important at the moment than the generalization.

In summary, the first two steps are information-gathering steps - what the elements of the problem are and the important things to know about them. The next two steps (inferring and predicting) are information processing steps - what one can do with (or about) it and what may or may not happen if one does. Then, having found out about something and learned about its use, the final step is to try to use it and, if it works out, make some generalizations about it. This last step, generalizing, is an information-using step. Obviously, there are modifications and nuances to the inductive sequence. It is not always necessary to begin with labelling, nor to cover all five steps at once. Generalizations may come only after several similar problems have been solved, at which time the similarities between them become generalizable.

Basically, the inductive method is one that allows the students to learn by reasoning to solve problems themselves. Notice we said themselves - not by - themselves. This is a very important distinction, because learning, especially by children with learning disabilities, does not just happen. In using the inductive method, the teacher plays a vital role in enabling the students to explore and work out a solution. By providing them with the necessary materials and tools for learning, by carefully and systematically structuring the learning process, and by asking questions that lead the students logically through a step-by-step sequence of problem solving, teachers

provide the means for the child to think and find the answer.

Although the solution of the problem is important, that is not the only purpose of the methodology. It also provides for a strategy the learner can become comfortable with and use in any new situation, as well as an opportunity to test the results of a given conclusion or action and begin to generalize learnings. There are other advantages to the problem-solving method as well. Because it makes use of a realistic problem situation as the basis for teaching, the problem-solving method allows the teacher to determine immediately exactly what the needs and deficiencies of each learner are. As each individual goes about trying to solve the problem, his failure or success tells the teacher not only whether he can or cannot solve the problem, but what the degree of knowledge or lack of it is. This makes it much easier for a teacher to individualize learning because she can assess exactly what each child needs to learn and discard material related to what he already knows.

In addition, there is evidence that a problem-solving approach has inherent in it more motivation than other approaches to learning. For one thing, the problem to be solved is real; it is there, a challenge, and involves bringing into play a number of skills and abilities. For another, there is immediate feedback to the learner - either he succeeds or doesn't - and this tells him what he needs to do or where he needs to seek help. The frustration of not knowing whether he can do something is gone. The fact that he can move at his own pace without concern about where the rest of the class is, about trying to keep up, and so on is also, if not motivating, at least not detrimental. Because problem situations change constantly, there is a dynamic quality to learning taking place in such a framework

Once a basic precept is learned, there is excitement in trying it out in different situations, in finding out what kinds of things ca and cannot be depended on in a situation; in seeing that, having so one problem, subsequent ones become easier to deal with. The probl solving approach highlights the interdependency of various skills a learnings. In traditional curricula, learning is often unilateral; how one learning relates to others is not made clear. When confront with a problem to solve requiring the use of several learnings, the importance and interrelationship of all learnings becomes apparent. Finally, the problem-solving approach has the advantage of being fam to noneducators. Almost everyone in every kind of job uses a proble solving approach in dealing with the demands of his job. Because of it is relatively easy for people other than teachers to approach shar knowledge and skills with retardates using such an approach. (O.K., is what needs to be done. How are you going to do it? What will you first? And so on). This advantage is very important to the final asp of the total instructional system - the delivery of the curriculum to the learners.

Although we believe the Social Learning Curriculum to be the first comprehensive attempt to utilize an inductive methodology with r tarded students, it is certainly not without precedent in the regular field of education. Experts who have been involved in the development of new curriculum materials in the fields of math, science, and social studies have tried to tie subject matter with practical procedures. Henrix (1961) describes an inductive approach in which students are ask to solve problems or discuss examples for which their prior knowledge i

appropriate and adequate. Then the problems are changed so the known procedures no longer work. The student then must "discover" a new method or principle enabling him to handle the new problems. Hendrix points out that simply telling students a new procedure or principle may be harmful because students may learn to "parrot" what they are told without knowing why. In fact, Hendrix points out that discovery can take place and students can understand a principle before they are able to verbalize it in many cases.

While the common theme running through all descriptions of inductive teaching is the empnasis on the teacher not telling students the principle or generalization they are to learn, the procedures for getting the student to come up with it vary (Bittinger, 1968). According to Bruner, discovery takes place when the pupil goes beyond the information given and gains new insights. This involves a logical rearrangement of facts. For others, discovery is a sudden "aha" process. Still others view it as the end result of a systematic presentation of evidence in an example-to-rule sequence. This involves the students in a process of induction that distinguishes it from the usual expository nature of classroom teaching where deduction is the rule. It is generally acknowledged that this kind of teaching is more difficult. Many teachers find it difficult to accept errors and become impatient with children not going straight to the "right" answer.

When a student is able to process information himself and arrive at his own solutions to problems, though, the knowledge he gains stays with him longer, is more easily transferable to other situations, and has a more important place in his mind. Most experts agree that what is learned by the student's own efforts will be learned more effectively. Moreover,

when a student is led to discover a generalization, he not only learns that principle, he also learns from the process itself. Eventually, he will be able to approach and explore a new situation himself, to go beyond the obvious information given, and to think in an inductive style (Wittrock, 1966).

While no one is suggesting that all teaching be done inductively, we are saying that by using this method, learning that is directly related to problem solution will probably be more effective. While other kinds of learning are as meaningful, and may be necessary before the inductive approach is called for, the final resolution of the problem can really only be done by the person who experiences the problem. Children probably have a very legitimate point when they say adults are always telling them "what to do," but seldom "how to do it," or, more importantly, letting them discover what needs to be done and their own way to do it. Too much education is based on the premise that there is a "right" way and all others are "wrong." With the retarded, we need to be more concerned that they have a way that is within their ability. Often, they are in a better position to discover the best way for them than we are.

CHAPTER V

DELIVERY SYSTEM

So far, we have discussed what should be taught educable retarded students at the secondary level and how it should be approached. We have also made the suggestion that schools, in their physical construction, policies, and procedures might not be able, at present, to provide the best possible education for these students. This is not to say that their education should be removed from the jurisdiction of the school, but that it should go beyond the present constraints and policies of most schools. The next question, then, is where should learning take place?

The basic model upon which the Social Learning Curriculum is built is that of the expanding environment (See Figure 1). This model says, quite simply, that a child starts out very egocentrically, aware of and interested in primarily those environmental factors impinging directly on him. As his mobility, and therefore environmental contacts, increase, so do his awareness, interest, and needs. Beyond the self, each environment in which he must operate has its own unique set of knowledges, skills, behaviors, mores, rules, artifacts, and people. The child's ability to function in each environment will be related to his awareness of these environmental factors. These factors and the interrelationship between each of them and the child can form the basis for curricular content.

Facts about the Self can be taught anywhere because the self is always present. Fundamental interactional behaviors can be taught wherever

basic interaction takes place, and is therefore amenable to instruction in the school. However, the unique qualities of each of the other environments (Home and Family, Neighborhood, and Community) are probably best taught in those environments. This becomes more true as the child moves upward through the environments, the conical shape of the model indicating that each environment becomes more complex than the one before it. Although one might make the assumption that much of the uniqueness of the Home and Family is taught in the home by the family, education being one of the functions of the family, that assumption becomes more and more shaky as the environments become more complex and ambiguous. So, while a case can be made for teaching about the Self and the Home and Family in a classroom setting, there is very little justification for assuming that valuable learning about the neighborhood and especially the community can also be limited to the classroom, or even the school.

In discussing secondary education with various experts and in looking at the literature, one is constantly confronted with the variance between what would be "ideal" and what actually happens. Usually, the compromi: is caused by constraints placed on the education of the retarded because this education traditionally takes place in a school setting where it is subj to rules, regulations, budget, safety and insurance problems, administration, and so on. Teachers frequently express the feeling that they could do a much better job if only they had the freedom to do what they felt was needed at any given time.

More and more, there are suggestions that perhaps some of the education of retarded adolescents should take place outside of the school.

Weaver (1971) said:

> "The question is what impact can the schools have on the general problem of severe deficiencies among children and adults. Perhaps none in their present form. But educational policy should not and cannot be limited to the school, although "education" and "school" have become fused in our minds. To identify and clarify social options for the future, we need to consider those on which education can have some impact."

The question according to Green (1969) is no longer, "Dare the schools build a new social order?" They have not, and they will not. Rather the question is, "Dare the social order erect a new system of schools, or a system of education without schools?" Such a question suggests a massive reform of the policy of education and reflects many of the concerns we have faced in developing meaningful curriculum for retarded adolescents.

Not many people would favor abandoning the schools entirely. Retaining them, however, does not mean that they cannot assume a new role vis-a-vis retarded children, or that students must do all their learning within the school setting. Coleman and others feel that the schools have come to accept too much of the responsibility for the education of children. The family used to play a major part in the education of youth. Now, both Mother and Father are often away at work, and are willing to abdicate most of their responsibility for the education of their children to the school. Meanwhile, children are seldom hired even for part-time jobs, and the role of the school has been enlarged to fill the vacuum that changes in the family and workplace have created.

Schools taking responsibility for the total education of children is not necessarily bad. What is dangerous is the assumption that the school building can take the place of other educational milieu, such as the home, neighborhood, marketplace, and job. It is when the school tries to provide equivalent education without the advantage of the variety and richness of other environments that the resultant education may end up lacking something.

There are many reasons why expanding the educational setting to include some of the elements of the total community is a good idea. Among these are:

1. Research (Michal-Smith, 1956; Dinger, 1961) indicates that an adolescent or adult with a mental age of five and minimum academic skills can learn to perform many job operations and maintain jobs. Major criteria for determining job success seem to be emotional stability and social maturity. Yet these are precisely the areas in which students are not able to learn and practice within the school setting because the school does not make the same demands on the student.

2. Practical, on-the-spot learning seems to arouse more interest and motivation in the students. Experience has shown that "book learning" has minimal payoff until the students gets the opportunity to be in a situation where he really needs the learning. If this opportunity comes only after he has supposedly completed his academic training, he may never benefit from school as much as he should.

3. Many EMR students come from culturally deprived homes. We know these homes to provide limited experiences for the offspring raised in them. If the school does not provide a variety of "real" experiences, the children from deprived homes may never get the experiences until they themselves are adults. And we know from numerous studies that by that time, habits, patterns of behavior, and expectations are firmly established and may never be changed.

4. The school program must reflect societal expectations if it is to prepare the mentally retarded pupil for survival and participation in his community. The failure of special class programs is often related to the fact that expectancy levels have been unrealistically low and the learning environment so sheltered that pupils have not been prepared to meet even minimum demands set by society. Getting out into the community in various capacities would give the students the opportunity to experience and measure the demands they will have to meet and prepare them to meet them.

5. One factor often working against the retarded is the prejudice society and employers feel toward them. As with other forms of prejudice, actual experiences with members of the minority group tend to diminish prejudicial feelings. The more settings the retarded can function in, the more people in the community they interact with, the greater the potential for elimination of feelings that work against their optimum development.

6. An old adage states that "responsibility educates." For many students, the first opportunity they have to accept real responsibility and exercise their own judgment comes after they have left the

accepting environment of the school and are "on their own." No doubt they learn a lot at this stage of their lives, but often that learning is too much too late. The opportunity for their accepting responsibility while there is still someone arou to provide props, when needed, must be part of the educational process undertaken by the school. Shielded from responsibility, students are apt to become irresponsible. Given responsibility at a time when they can handle it, they will assume much more of than anticipated.

7. Dunn (1964) has suggested that perhaps pupil's attitudes and motivations may be greater detriments to school learning than in tellectual capacity. He found they performed much better under conditions facilitating success than under neutral or negative o Given the phenomenon of the "six-hour retardate," who experience failure almost exclusively within the school, it is reasonable to assume that exposure to community settings would provide the success that might lead to more learning and possible carry-ove into classroom learning.

8. "Relevance" is a term we hear bandied about a lot these days. Certainly, it is relevant to the issue at hand. If school exper are perceived by students as having little or nothing to do with "real" world, they will not feel the need to give their all in pa cipating in them. Learning that takes place in community locati with the various people they need to interact with in real life be seen as real learning, satisfies a felt need. This is partic true if students have a part in the planning and decision making

). One recurring problem of adult retardates seems to be their lack of awareness of or unwillingness to take advantage of various community resources. Grambs's (1964) results from her research with culturally deprived children indicate that they have a need to learn to use community facilities like hospital clinics, employment service, DVR, and so on. As a totally new and unfamiliar experience entering such facilities can be very frightening. Acquainting students with available community resources before they are needed will tend to eliminate the fear associated with such facilities and increase their use.

). Placement counselors know that they cannot predict student success in a community vocational position to any reliable degree solely on the basis of information obtained in an academic setting. Involving students in a variety of outside experiences will furnish the counselor with additional information concerning the placement of a student. The greater the number and range of experiences, the greater the chance of discovering the kind of position best suited for a specific student, as well as those that would likely be unsuccessful.

11. Many educable retardates seem to feel some stigma related to their retardation. They try to "pass" both in school and in the community as nonretarded. The subterfuges they can resort to are sometimes amazing, but seldom self-serving. A program stressing their "normalcy" rather than their abnormality and providing for maximum integration into settings partially on a par with others would enhance the retardates' self concept.

12. Edgerton (1967) has pointed out that a frequently used coping device employed by adult retardates is the "intellectually normal benefactor," who operates "largely unseen and unnoticed to provide them with essential social competence and self-esteem." While we would hope graduates of our program would not need such a person, reality suggests that many may. If the difference between success and failure is dependent upon the retardate finding such a person, as Edgerton indicates, then large exposure to various community figures who are potential benefactors should increase the probability of finding someone to fill the role.

13. The mentally retarded seem to be able to transfer learning better when substantial similarity exists between the initial training and the transfer situations. This seems to be most effective when a considerable number of the operations required by the initial learning situation can be performed as a unit in the transfer situation (Hirsh and Lowman, 1965). This result, in conjunction with Iscoe and Semler's (1964) finding that actual objects facilitate learning better than pictures, would indicate that on-task and on-location training would be most effective. In other words, training of adjustment skills and transfer to the life environment will be maximally effective when the objects used, people interacted with, and location used are the same as those in which transfer needs take place.

14. Research results consistently suggest that to the degree that the student senses relevance and concreteness of content his learning is improved. Poor school performance and inadequate postschool adjustment may be partially accounted for by a lack of meaning, which the school

experience holds for him.

15. It has been demonstrated that loss of memory in the mentally retarded can be substantially reduced by repeated practice beyond the minimal mastery stage. This is even more critical if skills are to be retained over a long period of time. These results seem to highlight the need for distributed practice techniques to avoid an attentional lag. Moreover, the practice of learned skills is best done in the situation in which the skills will be used.

16. There are many ways to learn, and the methods are as varied as the subjects and situations the learner is confronted with. Schools, by nature, tend to capitalize on only a few of the many learning styles. As the life environments vary, so should the learning related to them. Furthermore, exposure to many kinds of people with different styles of imparting knowledge will allow the student to observe that many styles exist and that one is as good as another, if it works for an individual. It will also increase the student's chances of finding a style befitting him.

17. Many problems experienced by adult retardates can be summed up in one word - ambiguity. No matter how well prepared a person may be, or think he is, for a given situation, from time to time ambiguous elements emerge in the actual situation for which he was not prepared. Since these cannot be predicted, they cannot be taught for. Probably the only way to learn to deal with the ambiguity of a situation is to be on the spot and deal with it. At first, however, having someone else there in a supporting role can make a difference.

Thereafter, when students realize that they can make decisions and come through all right on their own a few times, they will establish a "set" of competence and thereafter act competently.

18. In dealing with people in "real life" situations, things happen that cannot be foreseen or controlled. These things often "do in" the retarded. Having to react to such events often makes a student act in a way he would not have expected. If he is successful, he receives positive reinforcement from the experience; it may serve to modify his behavior in the future. If not, he still has the back-up support of the school and an opportunity to try again without suffering the dire consequences of being fired, rejected, and so on.

19. Although the retarded learn more slowly, they usually have a shorter school life than the average student. It is important, therefore, that the school experience be all it can be. Since we know that the retarded child learns more effectively from the concrete in the context of actual experiences, we should expose him to as many examples of this kind of experience as possible. This is particularly important when the retardate is moving from the relatively sheltered and structured environment of the school into the wider community.

It is well documented that the environment posing the most adjustment problems for the mentally retarded is that of formal education. School presents him with the highest probability of failure and accounts for the highest

rate of identification. That this environment is not representative of the larger world is evident from the substantial proportion of identified retardates that "disappear" or are assimilated after they leave school (Robinson and Robinson, 1965). This speaks to numerous issues dealing with both the school and life environments. Perhaps the most pressing issue, however, is the very dissonance between the school and the world,which this fact highlights. This seems to indicate little commonality in the behaviors required in the two settings. One might therefore question the relevance of curriculum as preparation for postschool functioning if it continues to reflect convenience in administrative arrangement as much as any consideration of the needs of the student. (Spicker and Bartel, 1968).

Dick and Lewis (1972) put it well when they said:

> "Schools expect the EMR adolescent to learn to adjust socially while placed in a special room with an occasional class with his normal peers with the label mentally retarded. The normal population has a poor attitude toward the EMR and any behavioral disturbance only serves to reinforce negative stereotypes."

Clearly, for many reasons, students need some experiences outside the school environment.

While various attempts to go beyond the confines of the school building have become more popular recently, in most cases the main educational program still takes place within four walls. The work-study approach has been used as one way of making education on the secondary level more meaningful and practical for those whose education ends with the high school. In fact, work-study programs have proliferated greatly, in spite of the fact that follow-up studies of such programs have shown little increment.

Perhaps now, in retrospect, we can see why work-study has not turned out to be the panacea it was expected to be. There are probably two major and several minor problems with the work-study approach. The first is reflected the name "work-study." In effect, the student's life is divided into two parts: the work experience, where he is supposed to go out and "prove himself,"getting practical experience in one rather restricted area, and the study experience, where he is plied with the tools of learning,which he is often past needing or caring about. Not only is this an artificial division of life, but an incomplete one, for many of his experiences fit into neither category, and are therefore not "treated" in the educational system. Work experience, real or simulated, is very valuable, but what about dating experience, leisure-time experience, family-raising experience, and so on? By arbitrarily dividing the student's life into only two parts, we seem to be saying to him that other experiences don't matter much, and because they are only of secondary importance, he can learn how to cope with them on his own time. If, in fact, experience is a valuable teacher, why limit it to work and study? Let's use the benefits of on-the-spot experience to help the learner gain the knowledge and skills to cope with all kinds of life experiences.

The second major problem with work-study programs relate to the constraints of the school. Because the work experience shows the learner what he needs to know and to be able to do and gives him first-hand experience with the laws of consequences, the work setting is where the learning should take place. Unfortunately, most work situations are not set up for the work to stop when a student meets with a problem and for someone to help him work it out. At best, the student may be able to bring the problem to the school setting and get some help in solving it.

But some of the most important educational elements are missing by virtue of the problem being in the school setting instead of the work setting, and not being worked out immediately. At worst, the student experiences failure and feels there is something wrong with him because he couldn't solve the problem. This can lead to his misperceiving his abilities and feeling he will never be able to solve such problems, when, in actual fact, the system that put him in such an untenable situation was at fault.

Some other reasons why work-study programs alone are not sufficient relate to common practices and attitudes of schools using it. We often hear educators say that work-study programs give the student an opportunity to "prove himself." So does real work. The point is, if the student is not adequately prepared and supported for his initial work experiences, what may happen is that he will prove to himself what he has long suspected - he can't do it. Plopping unprepared students into jobs earlier must not be the goal. For any kind of work experience to be educational, it must have provisions for assistance, education, problem solving, retrial, and success.

Too many schools do not place students on a wide enough variety of jobs, if indeed they get to try more than one. This can be harmful in two ways. First, if a student is successful on his first job, he may be permanently relegated to that job on the theory that when you have a good thing going, don't rock the boat. This can be unfair to students who might prefer, or do even better in another kind of job. Second, one of the purported purposes of work-study is for the student to "become aware of the world of work." Since all jobs differ in some respects but are similar in others, how are students to be able to generalize about "work" if they don't have exposure to

many different kinds of jobs. Complete success on one kind of job does not necessarily make a student a "good worker" either. He can just as easily fail in his next job.

Even assuming all goes well and students are able to try out several jobs, there is still much that is lacking in what is needed for complete vocational adequacy. To give only one example, students are not left to find their own jobs. Jobs used in work-study programs are usually carefully screened by an adult, and employers are prepared for the student. Is this real? Will it help him find his own job after he leaves school?

Work experience is only one way of using community resources to make education more realistic and functional. The advantage of using trips for first-hand experiences in the community with regular classes has been discussed by Olsen (1949). Curtis (1944) felt that his research and the three studies he reviewed all showed the value of excursions as an aid to classroom learning. Olson and Bharnuratna (1956) concluded, after a review of research on field trips, that the method was valuable and should be used more. They felt that more research was needed in the use of community resources.

Nelson (1953) discussed more of the possibilities of the community as a "living laboratory." The report on the Nebraska Community Education Project (1959) stressed use of the community as a learning laboratory, although the resources were seen in terms of observation and knowledge rather than for practice in their use. This idea of a learning laboratory is closely related to the idea of use of community facilities as learning stations.

Obviously, the best place to solve a problem is where it occurs, and at the time it occurs. Why, then, don't we consider having students solve problems, including learning how to do so, in the situation related to the problem? And why don't we use the people in the situation to facilitate the learning and problem solving? If the benefits of such an approach are to be fully utilized, the "teacher" must be on the spot to assess the needs and deficiencies of the student, and take him from where he is through the problem-solving procedure to the resolution of it. Since teachers cannot be everywhere, other people in the total educational process must be used. In fact, there may be decided advantages to exposing students to a variety of adults in the learning prodess. For one thing, it will demonstrate that learning is not limited to school, but can take place anywhere at any time. Furthermore, it will provide a "set" in the student's mind that adults in a variety of positions can be asked for assistance in solving problems, and will give practice in seeking such assistance. It will also expose the students to different approaches and techniques some of which he may find fit his style of learning better than traditional ones.

The President's Panel on Mental Retardation in its Report to the President in October, 1962, noted that:

> "Many communities do not extend their services beyond the legal age of compulsory school attendance, and practically no programs exist which aid the retarded adolescent or young adult in his transition from school to work and community living." ... "Under the circumstances, it is clear that there is as yet no definitive answer to the best arrangements, and that we must continue to experiment and to evolve community programs which will provide timely and effective services to assist the mentally retarded to become employable and useful citizens." ... "It is crucial that young people feel that they have a contribution to make to society no matter what their level of skill. An unbroken line between leaving school and entering a job must be established."

Without disagreeing with the President's Panel, we feel it necessary to point out that there also needs to be an unbroken lin tween school, or education, and independent living. Too often, we of "independent living" in terms of getting and holding a job. Whi occasional reference is made to marrying and raising a family, most aspects of life are omitted in traditional training programs. The lying assumption seems to be that retardates, being "dumb," don't r as much from life to make them happy. Give them a dull job, a littl money, enough food, and a TV set, and that is all they require. Whi this may be true in terms of actual physical needs, it says nothing the quality of life the retardate leads. Edgerton (1967) paints a picture of even "successful" retardates, which leaves one feeling le down - is that all there is? Marriages are shaky, arguments frequen money wasted, lives dull, jobs boring, friends few, outside social activities nonexistent, problems frequent, and serious pleasures spar Surely the retardate, as a human being, deserves better than that! Shouldn't a good education also prepare him for the "good life" as be he is able to live it?

Perhaps more than his intellectual deficiencies, the retardate suffers from social attitudes. Not only do these attitudes make him f that he is inadequate, they continually put him into pigeonholes and positions that make his life difficult. As with other prejudices, attitudes toward the retarded as a group make it almost impossible for any one retardate to function in society as a normal individual. As with "black studies," some emphasis must be placed in the educational program on areas to increase the retardate's self-awareness and worth a

an individual as well as some practical ways to decrease or offset negative attitudes he encounters. But, you say, the problem is with society, not the retardate. True, but not the whole story. With the rise of black consciousness and the concept of "black is beautiful," black people began forcefully to protest that they had good qualities, abilities,and personalities. When they began to feel worthwhile, they demanded respect,and changed a lot of social attitudes, and in turn, began to be treated with respect. The same kind of thing can happen with retardates. If we can make them competent people who feel important, they will be responded to in kind. But even the most competent and sparkling retardate cannot change any social attitudes unless and until he interacts with others in society. Perhaps using the community and the "leaders" within it as a part of the total educational program for retardates will begin to change some basic attitudes toward them as a group. As Allport (1954) said: "The nub of the matter seems to be that contact must reach below the surface in order to be effective in altering prejudice. Only the kind of contact that leads people to do things together is likely to result in changed attitudes. It is the cooperative striving for a goal that engenders solidarity."

Given the fact that using the community as a classroom and the people in it as teachers is important to the optimum learning of the educable retardate, the next question is, how? Here we find very little help in the literature. While lots of people have written about the idea of specific learnings taking place in nonschool environments, very few, outside of the work-study advocates, have actually implemented any such ideas into an educational program. There are some programs for gifted students that use community resources in addition to the school, and some for addicts, dropouts,

and delinquents that make limited use of community facilities and institutions. The major contribution these programs have made is to demonstrate that it can be done.

Margaret Hudson (1967) did a pilot study in which a series of community learning stations was set up for students from a high school special education class to use in developing the understandings, attitudes, and skills needed for community living. The students received both orientation and practice in use of everyday community facilities. The study proved the feasibility of using public and private facilities in the community as learning stations for mentally retarded students. Successful use of community situations required preliminary preparation and learning. Much of the new learning was based on previous lessons or experiences in former years. In a sense, the community experiences were practice in applying skills and knowledge already acquired.

The use of the community as an extension of the school, which we envision in the Problem-Oriented Social-Vocational Adaptation Program, is considerably more extensive than anything previously attempted. Studies like Hudson's, however, indicate that it can be done, given the right attitude, preparation, and conditions.

Briefly, the POSVAP delivery system operates on the assumption that learning occurs most effectively at the time and place it needs to be applied. In addition, we feel it is likely that the people most familiar with the situation or facility in the community are in the best position to do much of the teaching related to their areas of expertise. Thus, for example, in the illustration presented in Figure 5, the objective of purchasing a week's food for a family of four could best be accomplished in

the local supermarket using the manager, cashier, stocker, butcher, and so on as resource people who might, under certain circumstances and when appropriate, perform a "teaching" role. The supermarket, as a "learning station," would be visited by a student or small group of students usually unaccompanied by the teacher. The students could use the supermarket setting as either a concrete learning environment or as a community resource for demonstrating or practicing previously acquired knowledge.

Looking again at Figure 5, we see that there are a number of "tool" items that are fairly straightforward. These items, being basic to many problem areas, have some value in and of themselves. They can also be taught, for the most part, within the walls of the school building. In order to make them more meaningful, however, some of them might be practiced outside of school in relation to a specific social situation. For example, the communication skill of asking, while teachable in simulated or classroom situations, becomes more meaningful when used as a tool related to the accomplishing of a specific objective. In this case, a student might be sent to the supermarket to ask various questions, directions, and assistance from the employees and other shoppers. Many of the nuances of this skill will apply equally well to other situations, and this relationship will most readily be seen by the student as he uses the skill in a variety of settings. At the very least, any of the tool skills can be enhanced by relating them to the problem. If you are working on listing, list the groceries to buy. If you are working on tabulating, tabulate the cost of the items on that list. If you are working on manners, discuss and practice manners related to being a good shopper. While these can be done in the classroom by simulating situations, they can also be done in the supermarket

in the real situation.

Whereas the tool items can usually be taught in the classroom, most of the problem items are best taught in community settings. By the time the student gets to the problem items, we assume he has mastered the necessary tool items to some extent. The problem items therefore take on a new double meaning. On the one hand, they make use of some resource to enhance the skill and knowledge acquired in the classroom setting; on the other, they provide an opportunity for the student to integrate the various skills and facts into a specific activity aimed at demonstrating his ability to solve a problem. For example, you can't go shopping unless you can get there. Using public transportation may be the only way in a given community. In that case, before the student can perform the overall objective, he must first be able to demonstrate his ability to use public transportation. He supposedly already knows such related things as how to tell time, give exact change, or anything else directly related to using public transportation. What he needs now is the opportunity to actually do it, both to prove he can and to get real experience in handling all of the aspects and contingencies of the problem. This can really only be done by his leaving the school alone and taking the bus to the supermarket. The same is true of the other problem items. A student cannot possibly choose the most appropriate person to ask for a specific kind of help unless he is in the supermarket and confronted by the potential helpers.

What this means, if we are to operate on the assumption that the teacher has assessed each student's knowledge and is letting him progress toward the ultimate objective at his own speed, is that at any given time perhaps half the class will be out of the school involved in various communi situations. One or two might be doing the public transportation, others mig

be at the market comparing prices, making a purchase, or locating the different foods. Still another might be down at the home economics extension service getting assistance and guidance in planning a good week's menu. The rest of the class will be working on various tool items, some independently and others with the aid of the teacher. All will be working toward the same objective at their own level and in the place where they can best accomplish the task assigned.

And where is the teacher while all this is going on? She has a redefined role. Instead of an "imparter" of knowledge, she has become a manager of learning. Her new role is, basically, one of assessing, planning for, and facilitating the learning. She will determine when a student is ready for the next step, assist him in planning how he will approach it, make necessary preparations for his foray into the community, talk with community resource people enlisting their support as teacher surrogates while the student is within their jurisdiction, act as a resource person to each student, and give encouragement when needed. In other words, she might be said to function in much the same way as a building contractor does. She is responsible for the overall building plan, but she does not build the whole education of the child alone. Rather, she manages a team of experts in various areas, calling each in at the most appropriate time, telling them what needs to be done, and giving them the necessary materials, tools, and blueprint. While she may have many assistants both inside and outside the school, she is in charge of the building of student's experiences and abilities. In this sense, we agree with Miller (1951) when he said:

> "The special education instructor is a teacher, counselor, and coordinator for all the mentally handicapped in the school...the teacher handling the pupils is in a better position to know what they can do."

Initially, of course, the teacher will need to spend a large proportion of her time and efforts in preparing both the students and the community for this new approach to education. Probably, the class will start together on one problem involving only one or two community resources, like the supermarket. As both the students and the supermarket personnel become familiar with the idea and actual implementation of community learning stations, the teacher can begin to add other resources to the community repertoire, so that eventually every child in the class may ideally, be interacting with a different community resource. This is individualized instruction in the extreme.

In summary, the secondary-level curriculum is based on the premise that optimum learning takes place when there is a need for the learner to solve a problem. It assumes that the most meaningful and interesting learning occurs when and where the problem arises. It also makes use of the people in the situation for direction of the learning who provide immediate feedback about its efficacy.

CHAPTER VI

Development Procedures

During 1972 and 1973, the Research and Development Center in Mental Retardation sent out two questionnaires to try to get a fairly complete and accurate picture of the existing situation in secondary education for the educable mentally retarded. The first questionnaire was sent to a random sample of school districts of varying sizes throughout the United States. Because the questionnaire went out toward the end of the school year, returns were only a little less than 50 percent. Because of this and the fact that some questions raised others also needing answers, another more extensive questionnaire was sent out in the winter of 1972-3 again to a random sample of six school districts in each state, Canadian province, and Puerto Rico as well as our own field-test network. The six random districts represented two districts having school populations of under 5000 students, two with populations of 5000 to 10,000, and two with over 10,000. The return from this random sampling was 54.4 percent.

The purpose of the questionnaires was twofold. First, we wanted to get as much information as we could about the current status of special education for the mentally retarded at the secondary level. To develop viable curriculum, we needed to assess the attitudes, resources, kinds of facilities, administrative jurisdictions, and major objectives of these programs. Second, knowing that the implementation of our proposed curriculum, especially the community aspect of the delivery system, would require some specific philosophies, resources, and quite a lot of flexibility within the sc... l

systems using it, we wanted to determine to what extent these currently existed in schools or, perhaps more important, to what extent attitudes and practices existed that would militate against a program such as ours. A tertiary objective was to see if any schools already involved in an educational program similar to ours existed because we wanted to approach them as potential field-test sites and ask them to share any information about problems, strategy, or evaluation.

The most important curriculum-related results of the first questionnaire can be found in Appendix B. The analysis of the data of the second questionnaire is underway, and will be put out in a separate paper in the near future. In fact, a report of the findings of the second, more extensive, questionnaire is the next step in the development of the Problem-Oriented Social-Vocational Adaptation Program.

Experience has taught us that schools are most receptive to educational programs or curricular innovations they perceive as filling their needs. Unfortunately, the needs of the school are often weighted more toward the needs of teachers and administrators than the needs of children. We feel that the curriculum we propose is vital to the needs of secondary-level EMR students. But we also realize that for it to be accepted into school systems, it must also appear to fill administrative and teacher needs. This is not to suggest that pupil and teacher needs are incompatible, but only that teachers and administrators will choose among various programs that purport to have identical or similar student objectives those easiest to manage. A program that appears to be difficult to administer must have other redeeming qualities. Even a demonstrated payoff may not be sufficient to get a program accepted unless the program includes some kind of assistance to the school in overcoming the difficulties or providing services to the school.

Being aware of the need for any program that is to be adopted and sed by school systems representing different geographic and demographic haracteristics to include such assistance, we decided the next step in leveloping the POSVAP was to meet with representative administrators and teachers throughout the country, to visit exemplary programs, and generally to seek advice on how to make the curriculum palatable and administerable. This phase of the development process will, in conjunction with the analysis of the data and other "preparatory" endeavors, take about a year.

Much of the information gleaned from the first year's projects will be aimed at developing a package to accompany the actual curriculum itself, but it will be devised for administrators to help them both decide whether or not the POSVAP program can be utilized by their schools and how to implement it if accepted. This Administrative Package will include the following information:

1. Overall Outline of Content
2. Rationale for Entire Program
3. Possible Problems that might arise from POSVAP
4. Suggested Procedures for enlisting support for program implementation from necessary sources
5. Guidelines for Implementation of Program
   a. A year before implementation
   b. Immediately before implementation
   c. During the program
6. Criteria for participation in field-testing of program
   a. Policies
   b. Practices
   c. Personnel
   d. Permissions
   e. Parameters

An additional activity, which will be going on during the year starting July 1, 1973, will be the attempt to identify the enter-in behaviors and knowledges of the target population - junior and senior high-level EMR students. One way of doing this involves our cooperation with the Rehabilitation and

Training Center in Eugene, Oregon. The Research and Training Center is developing a series of skill tests for administration to secondary-level school EMR students. By assisting them in the revision of the tests, we will be able to use the data they collect to establish the average levels of knowledge of students throughout the country.

Figure 8 shows the flow of activities involved in developing an instructional system such as POSVAP. A general indication of the times involved in the various steps is listed across the top. Owing to budgetary restrictions, the first and second stages are being handled by the POSVAP coordinator alone. The initiation of the third stage in the summer of 1974 will require the hiring of additional staff if the deadline of September, 1975 is to be met for field-testing. Probably a minimum of two full-time people and a graduate student will be required to carry on the actual development of the materials.

In a sense, Stages 1 and 2 are similar to the first two steps of the inductive method. That is, they are information-gathering steps much like labeling and detailing. Stages 3 and 4 correspond to the information-processing steps of inferring and predicting. That is, based on what we find to be the actual situation in the field, we will make inferences and decisions about what the final form and content of the curriculum will be. We will then verify our predictions through field-testing, and generalize what we find to be a revised curriculum to be made available to every school district that wants it.

Although we do not know exactly what the form and substance of the POSVAP will be, we do have some general ideas. Actually, the content, at least in terms of the maximum range, is fairly well circumspected. Content decisions will mostly be limited to making choices among which content should be covered first and how much detail is needed for any given piece of content. The

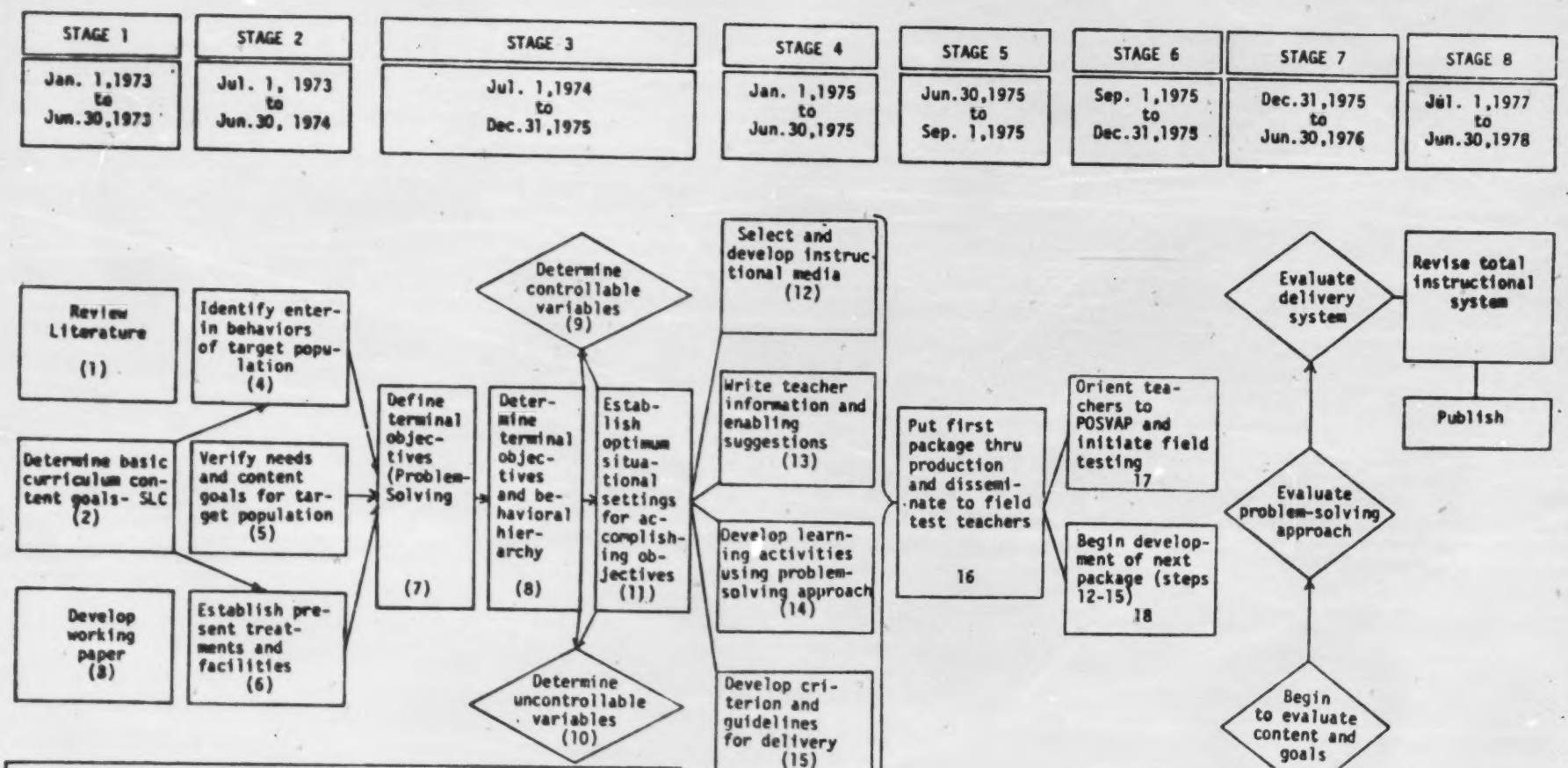

STAGE 1
Jan. 1,1973 to Jun.30,1973
STAGE 2
Jul. 1, 1973 to Jun.30, 1974
STAGE 3
Jul. 1,1974 to Dec.31,1975
STAGE 4
Jan. 1,1975 to Jun.30,1975
STAGE 5
Jun.30,1975 to Sep. 1,1975
STAGE 6
Sep. 1,1975 to Dec.31,1975
STAGE 7
Dec.31,1975 to Jun.30,1976
STAGE 8
Jul. 1,1977 to Jun.30,1978
Review Literature (1)
Identify enter-in behaviors of target population (4)
Determine basic curriculum content goals- SLC (2)
Verify needs and content goals for target population (5)
Develop working paper (3)
Establish present treatments and facilities (6)
Define terminal objectives (Problem-Solving (7)
Determine terminal objectives and behavioral hierarchy (8)
Determine controllable variables (9)
Determine uncontrollable variables (10)
Establish optimum situational settings for accomplishing objectives (11)
Select and develop instructional media (12)
Write teacher information and enabling suggestions (13)
Develop learning activities using problem-solving approach (14)
Develop criterion and guidelines for delivery (15)
Put first package thru production and disseminate to field test teachers 16
Orient teachers to POSVAP and initiate field testing 17
Begin development of next package (steps 12-15) 18
Evaluate delivery system
Revise total instructional system
Publish
Evaluate problem-solving approach
Begin to evaluate content and goals
Continue development of POSVAP packages

Figure 8

Activity Flow Chart for Developing Instructional System

gathering of base-line data on student's knowledge will assist in making these decisions.

A more difficult decision process is involved in the form the delivery system will take. There are basically three ways to confront students with content: by giving them a real experience, by simulating an experience, or by presenting the information vicariously. Feeling as we do that the inductive method is the most viable approach to learning,we naturally tend to feel that real experiences are most valuable. If one believes that learning takes place by allowing students to process and gather information and work out solutions to problems based on it, then it stands to reason that the involvement in the situation holding the information and the problem is most valuable. Similarly, if a real experience is not available, then the next best choice is probably a simulation of the experience through a device like role playing. Generally, as a last resort, we would agree that at times it is necessary to explain something to the students, or have them exposed to it in some other vicarious way such as watching a film.

We do realize, however, that the restrictions of time, geography, school policy, and so on can often render the most desirable method unfeasible. In such cases, the second choice must be used, and so on. Having said this, we must now retreat a bit and admit that not all learning best takes place in the actual situation in which it will be used. Sometimes this would result in such an "ordeal by fire" that the student would not be able to learn anything from the situation, being more involved with personal survival or something more basic. Many times previous learning is needed before the confrontation with the real situation occurs. Most of this previous learning can take place in the school, and vicariously. But these are decisions that will have to be

made, and transmitted to the teachers using the materials.

As we presently envision things, the overall curriculum for the secondary levels, junior and senior high, will involve about 100 objectives of the magnitude of the one illustrated in Figure 5. Some of these will be vocational objectives, related to getting and keeping a job. Many will be personal objectives, such as the one about feeding the family. Others, and they may be in the majority, will be social objectives, having to do with getting along with other people in various situations in our society.

In any case, each objective will be broken down along the lines of Figure 5, and teaching substance will be provided for the various skill and problem items needed to reach the overall objective. Worksheets may be provided for assessment and practice of some of the tool items, especially as they relate to the objective. Model inductive questioning sequences will be provided for many of the problem items. Procedures will be suggested for the out-of-school phase of the objective, including how to elicit assistance and cooperation from the community resource(s) involved, who to approach for what, how to make the experience most useful, and so on.

Along with all this, each piece of content related to the objective will be labeled as to the conditions under which it is best taught - real, simulated, or vicariously. When real is indicated, additional teacher information will be included to assist in managing the learning experience. Alternatives will also be given, in the event they are necessary. Also, the person(s) who seem to be the most ideal for interacting with the student in the teaching-learning situation will also be listed, with alternatives. In the problem items, this person will often be someone other than the classroom teacher. The teacher will act more as a manager of learning, or traffic cop, making sure that each student is involved in the kind of activity with the proper person and at the

best location that he needs to be. This allows for optimum use of resource teachers, regular teachers within the school, and community personnel.

Because this does, in a sense, remove the teacher from close control of the learning process, we will also provide guidelines for the community teacher surrogates, including inductive questioning sequences to be used by them as models in their interaction with the students.

In summary, the form of the Social Learning Curriculum will vary considerably from other curricula. The content, or outline of what is to be learned, will take the form of problem statements. Each of these problem statements will be broken down into the information needed to solve such a problem, the skills necessary, and the interrelationships between this and similar or familiar problem situations. These components, all added together, will make up the complete content of the Social Learning Curriculum. However, because of the structure, each student will cover only those parts he has not already mastered, or needs to briefly review. Each piece of curriculum content, or problem statement, will be written with instructions to the person expected to manage the learning process, complete with suggested questions to use in guiding the learner toward solution of the problem. In other words, the problem-solving approach will be an integral part of the curriculum package.

Finally, each problem will be analyzed in terms of the most important aspects of its solution, and appropriate situational setting will be suggested, as well as what people might reasonably be expected to serve as managers of learning for that problem. For example, given a problem in purchasing a week's groceries within a certain budgetary limit, the solution would probably best take place in the grocery store, with perhaps the store manager serving as the "teacher." Other problem situations might take place in community recreational

or service agencies, and so on. Suggestions for making use of facilities and personnel outside the school will be included, and each problem statement will have with it recommendations for off-campus settings for the learning experience, where they would seem to be appropriate.

We think the POSVAP can be the most exciting thing that has happened to secondary education for the educable mentally retarded. The combination of experiences, learning organization, and community involvement should make the education of these students more meaningful than has ever been the case. Certainly, the time has come for innovation. We feel this is it.

APPENDIX A

Item

Develop sense of responsibility
Develop work habits and attitudes necessary for individual maturing and job competence
Develop an awareness of skills, knowledges, attitudes, and personal qualities necessary in becoming a more employable person
Accepting responsibility for one's own behavior
Pride in work
Attitudes toward the job
Ability to follow directions
Characteristics necessary for satisfactory relationships with people such as employer, employee, supervisors, customers
Maintenance of good physical, mental, and emotional health in relation to work
Well-groomed look for work
Develop communication skills
Ability to plan and carry out plans
Factors contributing to success on the job
Understanding of what a customer expects, such as quality work and materials, honest answers, good service
Develop problem-solving abilities
Analysis of self in relation to demands of a job
What do I have to offer to the job
Job interview techniques
Importance of personal health and physical fitness
Ability to manage resources: time, money, energy
Locating and applying for a job
Understanding of one's values and their relationship to a job
Exposure to career responsibilities
Evaluation of job performance: by self, by supervisor
Writing business letters: application letters, letters of inquiry
Etiquette and behavior on the job
Insurance and liability
How to prepare a personal data sheet
Understanding of how people's personalities vary and affect their working with others
Commitment to ethical behavior
Care and maintenance of tools and equipment
Maintain order in work
Conserving materials and preventing waste
Entry level skills
Develop an attitude toward safety to apply in all situations
How to request references (of ability)
Emphasis on teaching job skills
Coping with unexpected circumstances that may arise
Respect for law and order
Know good sanitary practices
Future educational opportunities
Functional competence in basic mathematic processes

APPENDIX A (Cont'd)

Item

Formulation of vocational goals
Managing personal finances
Human relationships in family and employment situations
Role of sound nutrition practices to good health, personal appearance, and maximum production on the job
Use of credit, credit rating, costs of credit
Willingness to do routine work
Available postsecondary job training opportunities
Able to handle emergency situations
Responsibility for establishing pleasant "work climate"
Assume responsibility for assessment of basic reading skills
Job-like simulated experiences in school
Problems of adjustment to work
Wages, hours, conditions of work, employee benefits
Hiring policies of business firms
Combining job and home responsibilities
Employment agencies: public, private
How to take preemployment tests
Know emergency first aid procedure
Supervised work experience in the community
Competencies needed by persons in different occupational classifications
Job clusters: relationships between jobs, opportunity to transfer knowledge and skills from one area to another
Functions and services of agencies in the credit field, i.e., banks, savings and loan, insurance companies
Methods of terminating employment: employer, employee
Interpreting job descriptions
Understanding career-ladder opportunities
Preparation of role as family member
Selecting goods and services
Appreciation of contribution of work in contemporary society
Observation and study of occupations
Understanding of advertising and its effects on consumers-workers
Knowledge of employment trends
Problems peculiar to women who work
Summer/part-time employment opportunities
Insurance and liability
Paycheck deductions
Social security
Consumer protection and information agencies
Workman's compensation

APPENDIX A (Cont'd)

Federal and state wage and labor laws and regulations
The American economic system
Unemployment compensation and unemployment insurance
Labor union functions; workers' responsibilities, benefits
Small town and big city living experiences
Classification of occupations, e.g., professional, skilled, and so on
Kinds of business organizations: individual, partnership, cooperation, cooperative, government
How a business is set up and operated
Business management compared to personal life management
Principles of a free economic system compared to other economic systems
How to complete federal and state income tax forms

Paper presented at American Educational Research Association Annual Meeting, New Orleans, 1973. "Identification of Commonalities in Vocational Education at the Secondary Level" by Patricia D. Murphy, North Dakota State University.

APPENDIX B

In an attempt to obtain an up-to-date picture of what is happening in the field of secondary education for the mentally retarded across the country before beginning the development of secondary-level curriculum materials, a questionnaire was sent to school districts in every state asking for various kinds of information about their secondary programs. In all, 376 questionnaires were mailed out, representing three to each of three population groupings within each state. Where the overall population of the state did not warrant 3 questionnaires, 2 were sent to each group.

Every state was represented in the returns, which totaled 113, and divided among population groups as follows:

Type 1 - over 10,000 school population	- 27 returns
Type 2 - 5-10,000 school population	- 37 returns
Type 3 - under 5,000 school population	- 24 returns*
Other - unknown school population	- 25 returns#

The questionnaires were addressed to the superintendents of schools with the request that they be forwarded to the person most familiar with the secondary programs for completion. Questions generally dealt with age and development levels of students, kind of program available, administration of programs, curricular emphasis, and available resources. (A copy of the questionnaire is in the continuation proposal.) A few of the main findings are presented in the next few pages.

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* There are more returns from this group, but they reported a complete lack of secondary programs, so were not counted.

Some questionnaires were returned with no postmark. Since we had counted on the postmarks to identify the source, we ended up with a large unidentifiable group.

With very little variation, the chronological age range of students in the junior and senior high school EMR programs are 13-16 and 16-20 respectively. Not unexpectedly, school districts report a somewhat lower number of students in the secondary-level classes than in their primary-and intermediate-level classes. Most of the children in special education programs at the junior and senior high levels are attending the regular junior or senior high schools; 88 percent of the junior high programs were carried out in the junior high building, and 82 percent of the senior high programs in the high school building. One could assume, therefore, that the usual resources of secondary schools are also available to the educable students.

The question of whether or not these resources are used to maximum benefit with the EMR students is raised by the finding that, in spite of the location of EMR children in the regular school, 45 percent of the junior high programs still take place in wholly self-contained classrooms, while only 3 percent participate fully in regular class placement. Thirty-one percent are now in a resource room arrangement with the remainder in some combination of self-contained, resource room and regular placement. At the senior high level the picture changes slighly, but 35 percent are still in self-contained special class placements. Figure 1 shows the types of placement reported at the senior high level.

Figure 1: Senior High Pupil Placement

	Total Sample	Type 1	Type 2	Type 3
self-contained class	35%	36%	32%	43%
resource room	37%	40%	42%	29%
regular class	7%	4%	6%	10%
self-cont. & reg.	11%	12%	10%	10%
self-cont. & resource	4%	8%	3%	0%
resource & regular	2%	0%	3%	0%
all three	2%	0%	3%	5%

These figures would seem to indicate that the furor over differential placement and treatment of retarded children has not yet been felt at the local levels to the extent that might be expected. Although the question of special class placement over other types of arrangements is yet unsolved, it seems safe to say that large numbers of EMR students are still in nonintegrated situations.

The relative "isolation" is further indicated by the answers to the question of how many teachers, on the average, were seen by students per week. The number reported was not significantly higher at the senior high level than at the junior high level, the mean number being about 4 1/2 in each case. This figure is indeed low when one considers the wide array of teachers who could potentially interact with students in a high school setting, and can perhaps be explained by the assumption that most of the learning takes place with the special education teacher or resource teacher. Large school districts did tend to report a greater number of teachers than small districts - at the high school level almost two more per week (5 1/4 versus 3 1/2).

Since there seems to be very little difference in the amount of change students at the senior high must adapt to in terms of moving from one setting and teacher to another, one would not expect adaptive ability to be a major reason for deciding when a child was ready to move from the junior high to the senior high program. As it turns out, social and emotional adjustment is a factor in the decision over 40 percent of the time, but chronological age emerges as the largest single factor in the decision to move a student on. This helps to explain the similarity in ages at each level. Figure 2 gives the reasons for the decision to move a

student to the senior high class. In some cases, a combination of factors went into the decision. In all three types of school districts, the mean age of transition was 15 1/2 and the mode was 16.

Figure 2: Basis for Transfer to Senior High Program

	Total Sample	Type 1	Type 2	Type 3
Age	63%	63%	53%	53%
Academic	35%	33%	27%	30%
Soc.-Emot. Adjustment	44%	30%	53%	17%
Work readiness	18%	18%	23%	3%
Admin. decision	38%	30%	17%	27%

In addition to trying to find out where EMR teen-agers are in the schools and what resources they have at their disposal, we were primarily interested to find out what types of programs in which they were involved. In general, what impact are the resources and settings having on students in terms of what they are being taught? What emphases are the teachers putting on the curriculum used with these students? Does it correspond to the goals we have set for the POSVAP? Is there any difference between what is actually happening in the field, and what teachers and administrators think ought to be happening?

One way in which we attempted to get at the answers to these questions was to ask what the title of the program for educable youngsters in the senior high was called. An astounding number of school districts reported the title as some derivation of the traditional special education. About 65 percent reported "Special Education," "Special Class," "EMR Program," "Program for EMH Children," and so on. A few schools have tried to remove the stigma inherent in such titles by using different terminology (learning disabled children, reticent children, and so on), and about

18 percent have adopted titles indicating the program has some social, occupational or vocational emphasis (prevocational education, work-study, and so on).

By looking at the titles and descriptions of the programs given by the respondents, we attempted to categorize the programs by what seemed to be their major intent. When so categorized, the programs break down like this:

Intent	Total	Type 1	Type 2	Type 3	Other
Academic	52%	47%	48%	66%	58%
Academic & Vocational	13%	25%	12%	5%	15%
Vocational	22%	16%	33%	15%	20%

Apparently, programs are still intended to be predominantly academic, or "educational" in traditional terms rather than social or occupational in nature. Social emphasis almost never appears as the major intent of a program. This is even more true in smaller towns, where there is a noticeable decrease in vocational emphasis. In general, there is an increase of vocational emphasis in the senior high classes over the junior high where the academic emphasis was 74 percent overall. Again, one wonders why the amount of discussion of the advantages of work-study and vocational placement is not reflected in existing programs at the local level.

Another indication of the intent of the program may be derived from knowing who is responsible for the administration, decision making, curriculum choice, and content of the educable program. At the senior high level, 82 percent reported only one person as having primary responsibility for the administration of the program. There was no significant increase in the number of people involved in the administration of senior high programs in spite of the increase in vocational emphasis. In most cases,

the persons administering senior high programs are special services personnel, i.e., director of special education, school psychologist, special education supervisor. In spite of the increase in emphasis on vocational aspects to 22 percent at the senior high level, vocational rehabilitation involvement in administrating programs is still reported as only 5 percent. One has to question the quality and effectiveness of the vocational aspects of the programs when there is so little involvement in decision making on the part of vocational professionals. We know some states have entered into agreements with the Division of Vocational Rehabilitation as second or third parties in planning and carrying out secondar EMR programs. Is this true in only 9 percent of cases, or are school systems reluctant to admit that DVR has a hand in the administration of their programs?

Figure 3: Type of Person(s) Responsible for Administration of Senior High Programs

	Total	Type 1	Type 2	Type 3
Teacher	14%	8%	22%	16%
Principal/Sup't.	19%	39%	23%	21%
Spec. Serv. Pers.	61%	69%	63%	58%
Voc. Rehab.	9%	7%	10%	5%
State	1%	0%	3%	0%

For further information on the direction taken by programs for EMR teen-agers, respondees were asked to list the major objectives of their programs for the educable mentally retarded at the secondary level. In listing major objectives, respondees showed a further awareness of vocational needs for high school students by indicating a 15 percent increase in vocational objectives over what they listed at the junior high level. However, the emphasis on academic, social adjustment and self sufficiency objectives did not change from the junior to the senior high levels.

Also, it should be noted, academic objectives still rank second, above social adjustment objectives. While the increase in vocational objectives is encouraging, one wonders why it is not accompanied by a lessening of emphasis on academics. If academic objectives are still as important as they were in the junior high, and as much time is therefore devoted to them, where will the additional time for increased vocational involvement come?

The chart below shows the identified major objectives at the senior high level. Where more than one objective was given, it was assumed the objectives were considered approximately equal in importance. The objectives seemed to fall in the categories listed.

Figure 4: Major Objectives of Senior High EMR Programs*

Objective	Total	Type 1	Type 2	Type 3
Vocational	72%	79%	70%	55%
Academic	40%	54%	36%	32%
Social Adjustment	34%	39%	24%	36%
Self-sufficiency	20%	32%	18%	23%
Mental Health	16%	18%	15%	18%
Individual Instruction	12%	11%	12%	5%
Physical Needs	9%	4%	9%	14%
Citizenship	9%	14%	6%	5%
Normalcy	5%	4%	6%	5%
Living Skills	5%	0%	9%	9%
Program Maintenance	4%	4%	6%	5%
Leisure Time	4%	4%	3%	9%
Moral Objectives	1%	0%	0%	5%

Looking at these objectives, one can make certain assumptions about what might be expected in the programs they represent. For example, one might assume that, because vocational goals are very primary in 72 percent of the senior high schools, a corresponding percentage would be interested

*The objectives listed above were not stated by each program. They were stated in combinations and therefore total over 100 percent.

in some kind of testing that would evaluate the students' vocational abilities. In fact, only 7 percent of the schools give any kind of vocational inventories (Kuder, Strong), and this represents no increase from the junior high level. Even at the high school level, only 24 percent report any on-the-job assessment of students. In sharp contrast to this, 75 percent of the schools give academic achievement tests, even though academic objectives are considered secondary at the high school level. In spite of studies showing social and behavioral problems as being the most damaging to the adjustment and employability of adult EMRs, tests of adaptive behavior are almost nonexistent.

Figure 5 shows the percentages of schools reporting that they administer various types of tests, or gather other information on the students at the senior high level.

Figure 5: Information collected at Jr. High level on EMR students

Test Type	Total	Type 1	Type 2	Type 3
Achievement	80%	96%	67%	73%
Teaching Evaluat'n	46%	43%	55%	32%
Intelligence	59%	46%	61%	59%
Personality	5%	7%	10%	0%
Voc'l Inventories	7%	7%	10%	0%
Test of Adaptive Behavior	6%	11%	6%	5%
On-job Assessm't	5%	14%	3%	0%
Information collected at Sr. High level on EMR students				
Achievement	75%	93%	60%	61%
Teacher Evaluat'n	43%	32%	47%	39%
Intelligence	57%	43%	57%	61%
Personality	7%	7%	13%	4%
Voc'l Inventories	7%	7%	13%	0%
Test of Adaptive Behavior	9%	11%	10%	9%
On-job Assessm't	24%	21%	30%	13%

It is interesting to note that only a little more than half of the schools reevaluate the intelligence of their students at the secondary levels. Large cities report even less intelligence testing than medium and small towns. As there seems to be some evidence that social adaptation and employment tend to raise IQs (Saenger, 1957), one wonders at the lack of testing during involvement in the secondary program.

Yet another indicator of the type of program being carried out in the school might be the kinds of resources and equipment the school has at the disposal of EMR students. Again, one would expect various vocation-related items to be available if the emphasis is truly on vocational training. In fact, as Figure 6 shows, most schools do have certain types of equipment readily available. However, specific vocational equipment such as lathes, auto repair equipment, keypunch machines, and so on were reported in less than 5 percent of the schools surveyed. There might also be some question as to the priorities set by the schools in the type of equipment they purchase, since the carpentry and needle trades are heavily unionized and somewhat overstaffed.

Figure 6: Percentages of Schools Having Various Equipment Available

	Total	Type 1	Type 2	Type 3
Kitchen Appliances	86%	85%	86%	96%
Laundry Equipment	50%	63%	49%	46%
Woodwork'g & Tools	88%	96%	86%	88%
Sewing Machines	89%	96%	92%	83%
Office Equipment	73%	81%	68%	71%

In general, it would seem that schools are spending a great deal of money, if not time, on equipment to teach specific vocational skills which may or may not be marketable. If this is at the expense of social training, it would appear to be counterproductive in view of the many

studies (Kolstoe, 1965; Fernald, and so on) showing that retardates do not fail because of lack of specific job skills, but because of social and behavioral problems.

A paradox arises when one looks at what is actually happening in the classes of EMR youngsters at the secondary levels. In spite of the seemingly prevalent belief, as stated in program objectives, in vocational, social skill, and adaptation training, one third of the average school day is spent on the traditional academic subjects and nearly another hour on related subjects. If the average school day is six hours, this means half of it is spent in nonvocational or nonsocial learning pursuits. On-the-job training is given little more than an hour and a half, and often at least part of that is over and above the six-hour school day. In other words, it is an addition to the traditional curriculum more than it is a substitution for academic areas. This is further demonstrated by the fact that the amount of time devoted to academic skills does not drop substantially from the time given to them at the junior high level. In fact, all areas remain approximately the same in time concept on-the-job training, which increases by about an hour and a quarter a day. Figure 7 shows the breakdown of the senior high school day in terms of hours and tenths of hours spent in each area.

Figure 7: Hours Per Day Spent on Various Activities at Senior High Level

Activities	Total	Type 1	Type 2	Type 3
Academic skills	2.0	1.9	2.0	2.1
Soc. - Occu. Skills	1.1	1.1	1.3	1.0
Related Subjects	.8	.8	.9	.9
On-Job Training	1.6	1.7	1.7	1.3
Indiv. - grp. Counsel'g	.3	.2	.3	.4
Specific Vo. Training	.8	.8	.9	.6

Perhaps this continued emphasis on the academic aspects of education at the expense of social and vocational training is in part responsible for two other factors that came out in our survey questionnaire. The first notable finding is that approximately 28 percent of the graduates of the EMR high school programs receive some type of additional training in the community. This would seem to indicate that about a quarter of the students who see the public school educational program through to completion still become involved in a program to help them be more prepared to function in society or get a specific job. Since the mean age of graduation was identified as eighteen and one half years old, which is older than the mean age for "normal" children, this means many EMR students are older than their peers before they are able to compete on the job market for the unskilled and semiskilled jobs available.

The second piece of information has to do with those students who, for some reason, do not even see the program through to completion (or graduation), but drop out somewhere along the line. In our sample, about 12 percent of the students fell into this category. Interestingly, the mean, median, and mode age for dropping out was 17. This suggests that many students are trying to stay in school beyond the mandatory 16-year age limit, but for some reason are finding it unsatisfactory and leaving before completion. The reasons given for dropping out are interesting, and are shown in Figure 8. By far the largest number, over half, drop out to go to work. This may be good or bad, depending on how well they maintain the jobs they leave school for. Unfortunately, as studies by Chaffin (1971) et al. seem to indicate, EMRs who leave school early to go to work do not fare any better than their peers who stay in school, in spite of their earlier experience in the job market. Many of them lose their jobs, and, three years after they

would have graduated, are more apt to be out of work than those who finished school.

Figure 8: Reasons for Dropping Out of High School Program

	Total	Type 1	Type 2	Type 3
Lack academic success	11%	7%	12%	22%
Lack interest/attitude	32%	22%	35%	33%
Go elsewhere	5%	4%	4%	6%
Go to work	52%	52%	42%	50%
Marriage	15%	4%	19%	22%
Pregnancy	10%	4%	19%	11%
Lack parental support	17%	22%	12%	11%
Adjustment/behavior problem	18%	18%	23%	6%
Lack curriculum	1%	0%	4%	0%
Age	7%	11%		

Other studies also have shown about one-third of EMR students dropping out because of lack of interest or motivation (Wendler, 1967). While there is much to be said for self-motivation on the part of students, one would nevertheless expect a fairly high degree of motivation would be generated by a program that was fulfilling the needs of the students.

Another interesting aspect of the dropout picture was the reversal of percentages dropping out for lack of academic success and adjustment of behavior problems between Type 1 school and Type 3. Although Type 3 schools have consistently indicated that they place more emphasis on academics, it is possible that the explanation for this reversal is not as simple as that. Perhaps in larger schools, the lack of academic success is more apt to lead to maladaptive behavior as the only available outlet for the frustrations build up by failure. In smaller schools and towns it is possible that more outlets are available in both school and community so the children can be successful at some other level, and the academic failure remains just that.

Perhaps the higher number leaving for marriage shows that there is a higher degree of social adaptation taking place in smaller communities.

Whatever the reasons for dropping out, the prospects for further training and assistance do not look good. Unfortunately for dropouts, including those who go to work and subsequently lose their jobs, relatively few communities offer additional training resources. This is most true in small communities, although it is possible that by going to a nearby city, students could avail themselves of some postschool programs.

Finally, the questionnaire gave the respondents the opportunity to indicate to us what they thought the "ideal" curriculum for EMR teen-agers ought to be. Ten subject areas were listed, and respondees were asked to rank them in the order of importance for boys and girls separately. Figure 9 shows the results of this ranking at the high school level. Comparing these rankings with similar rankings at the junior high-level showed a reversal of the positions of reading and vocational training. That is, reading, which was most important at the junior high level, became third most important at the senior high level while vocational training which ranked third became most important at the senior high level. Other subjects ranked in the same order at both levels, but were given slightly different weightings.

Figure 9: Rank Order of Activities for Males and Females at High School Level

Males		Females
1	Vocational Training	1
2	Social Learning	2
3	Reading	4
4	Family Living	3
5.5	Health (incl. sex)	6
5.5	Arithmetic	8
7	Citizenship	7
8	Leisure Time	9
9	Home Economics	5
10	Related Subjects	10

These rankings and weightings are interesting from several points of view. First, they indicate that administrators are more aware of the needs of retarded young adults than an examination of what actually happens in the programs for EMRs would indicate. Ever since Fernald's study, research and experience have demonstrated the importance of vocational and social adequacy in the adjustment of the mentally retarded in society. The studies on the retarded in society indicate that the proportion of retardates meeting the criteria for social adjustment is decreasing as the complexity of society and the competition for jobs increase. In almost every case, the determinants appear to be those factors that cut across the broad areas of work, family, leisure, and interpersonal relationships, rather than those confined to the technical aspects of the work scene such as the ability to operate a specific device or the academic skills traditionally taught in the schools.

The public school class for educable mentally retarded children should be constituted to offer extensive and intensive preparation for social functioning at maturity. The administrators who responded to our questionnaire indicated that they felt, in terms of objectives, the programs for which they were responsible were so constituted. Paradoxically, however, the special class has always been much stronger in academic learning than it is in structured social and vocational learning. The results of our survey indicate that this picture has not changed much up to the present time.

The second interesting fact emerging from the "ideal" curriculum ranking is the obvious disparity between what is seen as important for boys as opposed to what is needed by girls. The demands placed on the retardate in the socio-vocational world requires that both girls and boys be skilled in the areas of family living, home economics, and vocational training.

Evidently, the traditional roles of females as wife and mother are still predominant in the educational planning at the high school level. This is probably understandable in view of the fact that retarded females do get married and raise families about as frequently as to nonretarded females. Male retardates, on the other hand, may require more instruction in these skills than they get, because they marry less frequently, and tend to marry retarded females who may be less competent to "run a household" than their normal peers. What is more difficult to explain is why females are considered to need instruction in arithmetic, citizenship, and leisure-time pursuits to a lesser extent than males.

Perhaps the most hopeful note in the entire survey is that the people involved in programs for the EMRs do realize the need for more emphasis on vocational and social learning. Hopefully, this means that they are "ripe" for a curriculum program that will provide the structure, content, and delivery system to enable the school to pursue their goals and ideals more easily. Certainly, if the disparity between what ought to happen and what is happening is caused by the lack of widely available and easily usable curriculum materials, the implementation of the POSVAP may show a substantial gain in emphasis on vocational and social objectives.

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